

Weston Solutions, Inc. 1435 Garrison Street Suite 100 Lakewood, CO 80215 303-729-6100 Fax 303-729-6101 www.westonsolutions.com

4 January 2017

Don Goodrich U.S. EPA, Region 8 1595 Wynkoop St Denver, CO 80202

RE: Bonita Peak DV ESAT A-129 TDD 0004/1612-04

Dear Mr. Goodrich:

Please find attached the data validation report for Sample Delivery Groups C160913, C161022, and C161023 for the Bonita Peak site. This report has been prepared by START chemists in accordance with TDD 1612-04.

If you have any questions or require additional information, please contact me by phone at 303-729-6124 or by email at natalie.quiet@westonsolutions.com.

Very truly yours,

WESTON SOLUTIONS, INC.

Natalie Quiet Project Manager

Enclosures: Data Validation Report

DCN: W0434.4B.01210



DATA VALIDATION REPORT

Bonita Peak DV ESAT A-129

SAMPLE DELIVERY GROUP: C160913

Prepared by

MEC^X 12269 East Vassar Drive Aurora, CO 80014

Project: Bonita Peak DV ESAT A-129

SDG: C160913

I. INTRODUCTION

Task Order Title: Bonita Peak DV ESAT A-129

Contract Task Order: 20408.012.004.0434.00

Sample Delivery Group: C160913
Weston Project Manager: Natalie Quiet
EPA Project Manager: Don Goodrich

TDD No.: 0004/1612-04 Case No.: ESAT TDF A-129

Matrix: Water QC Level: Stage 4

No. of Samples: 3
No. of Reanalyses/Dilutions: 0

Laboratory: ESAT

Table 1. Sample Identification

Location ID	Sample No.	Lab Sample	Matrix	Collection Date	Method
		Name	Туре		
A12	A8M5-2172	C160913-02	Water	9/28/2016 9:30:00 AM	300.0
CC02D	A8M5-2172	C160913-01	Water	9/27/2016 10:58:00 AM	300.0
M12C	A8M5-2172	C160913-03	Water	9/29/2016 8:40:00 AM	300.0

It should be noted that the reviewer used laboratory sample names to identify specific sample fractions in this report.

II. Sample Management

Anomalies with sample management are noted below. The samples were received within the temperature limits of >0°C to <6°C. According to the Sample Receipt Form (SRF) the samples were received intact and properly preserved. The chains of custody (COC) were signed and dated by field and/or laboratory personnel.

According to the SRF, custody seals were absent for samples C161913-02 and C161913-03.

1

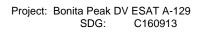


Data Qualifier Reference Table

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins or PCB congeners.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
J+	Not applicable	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample, and may have a potential positive bias.
J-	Not applicable	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample, and may have a potential negative bias.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.



Qualifier	Organics	Inorganics	
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.	
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	





Qualification Code Reference Table

Qualifier	Organics	Inorganics
Н	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used for the calibration was incorrect
С	Calibration %RSD or %D was noncompliant.	Correlation coefficient is <0.995 or calibration was noncompliant.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
В	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
L1	LCS/LCSD RPD was outside control limits.	LCS/LCSD RPD was outside control limits.
Q	MS/MSD recovery was poor.	MS recovery was poor.
Q1	MS/MSD RPD was outside control limits.	MS/MSD RPD was outside control limits.
Е	Not applicable.	Duplicates showed poor agreement.
1	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
Α	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	ICPMS tune was not compliant.
Т	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present.	Not applicable.
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
F1	Field duplicate results were outside the control limit.	Field duplicate results were outside the control limit.
\$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.



Qualifier	Organics	Inorganics
D	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
Р	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
* , *	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.



III. Method Analyses

A. METHOD 300.0 -Anions

Reviewed By: M. Hilchey

Date Reviewed: December 28, 2016

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *Quality* Assurance Project Plan for U. S. EPA Region 8 CERCLA Site Assessment (Rev. 2015); United States Environmental Protection Agency Methods 300.0; and the National Functional Guidelines for Inorganic Superfund Data Review (2014).

- Holding Times: The analytical holding times, as listed below, were met.
 - o Sulfate, fluoride and chloride (300.0) 28 days
 - O Nitrate as N and nitrite as N (300.0) 48 hours
- Calibration: Method initial calibration requirements were met. Initial (ICV) and continuing calibration (CCV) frequency requirements were met. ICV and CCV recoveries were within 90-110%.
- Blanks: No target analytes were reported in the method blanks or calibration blanks.
- Laboratory Control Samples (LCS): The LCS recoveries were within the laboratory control limits for all target analytes.
- Laboratory Duplicates: Laboratory duplicate analysis was performed on sample C161913-01. All RPDs met the laboratory control limit of ≤20% for sample results <5x RL.
- Matrix Spike/Matrix Spike Duplicate: Matrix spike analysis was performed on sample C161913-01.
 Recoveries for all target analytes met laboratory control limits.
- Sample Result Verification: Sample results were verified for all samples reviewed at validation Stage 4. Nondetects are valid to the RL.
 - Several samples were diluted for anions analysis. Detected results for dilutions were flagged with "D" by the laboratory. Reporting limits were appropriately adjusted.
- Field QC Samples: MEC^x evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^x used the remaining detects to evaluate the associated site sample. Findings associated with field QC samples are summarized below.
 - o Field Blanks and Equipment Rinsates: No field blanks or equipment blank samples were identified for this SDG.
 - Field Duplicates: There were no field duplicate samples identified for this SDG.

Validated Sample Result Forms C160913

Analysis Metho	od WC -	Anions by I	on Chro	эта					
Lab Sample Name:	C160913-01	•	No: A8M:			Sample D	ate: 9/27/2	2016 10:58:00 A	AM
Location CC02D			Matrix Ty	vpe: Water	•				
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Chloride		16887-00-6	<3.2	3.2	1.6	mg/L	U	U	
Fluoride		16984-48-8	6.2	0.8	0.4	mg/L	D		
Nitrate as N		NA	< 0.4	0.4	0.2	mg/L	U	U	
Nitrite as N		NA	< 0.4	0.4	0.2	mg/L	U	U	
Sulfate as SO4		148-08-798	745	8.0	4.0	mg/L	D		
Lab Sample Name:	C160913-02	Sample	No: A8M:	5-2172		Sample D	ate: 9/28/2	2016 9:30:00 A	M
Location	A12				Matrix Ty	vpe: Water	•		
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Chloride		16887-00-6	<1.6	1.6	0.8	mg/L	U	U	
Fluoride		16984-48-8	1.3	0.4	0.2	mg/L	D		
Nitrate as N		NA	< 0.2	0.2	0.1	mg/L	U	U	
Nitrite as N		NA	< 0.2	0.2	0.1	mg/L	U	U	
Sulfate as SO4		148-08-798	384	4.0	2.0	mg/L	D		
Lab Sample Name:	C160913-03	Sample	No: A8M:	5-2172		Sample D	ate: 9/29/2	2016 8:40:00 A	M
Location	M12C				Matrix Ty	vpe: Water	•		
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Chloride		16887-00-6	<1.6	1.6	0.8	mg/L	U	U	
Fluoride		16984-48-8	1.0	0.4	0.2	mg/L	D		
Nitrate as N		NA	< 0.2	0.2	0.1	mg/L	U	U	
Nitrite as N		NA	< 0.2	0.2	0.1	mg/L	U	U	
Sulfate as SO4		148-08-798	392	4.0	2.0	mg/L	D		

Wednesday, January 04, 2017 Page 1 of 1



DATA VALIDATION REPORT

Bonita Peak DV ESAT A-129

SAMPLE DELIVERY GROUP: C161022

Prepared by

MEC^X 12269 East Vassar Drive Aurora, CO 80014



Project: Bonita Peak DV ESAT A-129

SDG: C161022

I. INTRODUCTION

Task Order Title: Bonita Peak DV ESAT A-129

Contract Task Order: 20408.012.004.0434.00

Sample Delivery Group: C161022
Weston Project Manager: Natalie Quiet
EPA Project Manager: Don Goodrich

TDD No.: 0004/1612-04 Case No.: ESAT TDF A-129

Matrix: Solid QC Level: Stage 4

No. of Samples: 23 No. of Reanalyses/Dilutions: 0

Laboratory: ESAT

Table 1. Sample Identification

Location ID	Sample No.	Lab Sample	Matrix	Collection Date	Method
Location ib	Sumple No.	Name	Туре	Conection Date	Wethou
A05	A8M5-2565	C161022-01	Solid	10/7/2016 1:00:00 PM	200.7, 200.8, 245.1
A07	A8M5-2566	C161022-02	Solid	10/7/2016 11:00:00 AM	200.7, 200.8, 245.1
A34	A8M5-2564	C161022-03	Solid	10/6/2016 10:00:00 AM	200.7, 200.8, 245.1
A37	A8M5-2563	C161022-04	Solid	10/6/2016 1:00:00 PM	200.7, 200.8, 245.1
A43	A8M5-2561	C161022-05	Solid	10/4/2016 3:00:00 PM	200.7, 200.8, 245.1
A45	A8M5-2559	C161022-06	Solid	10/4/2016 10:00:00 AM	200.7, 200.8, 245.1
A48	A8M5-2560	C161022-07	Solid	10/4/2016 1:00:00 PM	200.7, 200.8, 245.1
A56	A8M5-2558	C161022-08	Solid	10/3/2016 12:00:00 PM	200.7, 200.8, 245.1
An Rv-abv Eureka	A8M5-2569	C161022-09	Solid	10/11/2016 2:00:00 PM	200.7, 200.8, 245.1
An RV-Abv Minnie	A8M5-2570	C161022-10	Solid	10/11/2016 10:30:00 AM	200.7, 200.8, 245.1
Hermosa Cr	A8M5-2557	C161022-11	Solid	9/30/2016 10:00:00 AM	200.7, 200.8, 245.1
M08	A8M5-2578	C161022-12	Solid	10/17/2016 1:00:00 PM	200.7, 200.8, 245.1
M10a	A8M5-2577	C161022-13	Solid	10/17/2016 10:30:00 AM	200.7, 200.8, 245.1
M14B	A8M5-2576	C161022-14	Solid	10/14/2016 2:00:00 PM	200.7, 200.8, 245.1
M27	A8M5-2574	C161022-15	Solid	10/13/2016 12:30:00 PM	200.7, 200.8, 245.1
M28	A8M5-2573	C161022-16	Solid	10/13/2016 10:00:00 AM	200.7, 200.8, 245.1
M30	A8M5-2571	C161022-17	Solid	10/12/2016 3:00:00 PM	200.7, 200.8, 245.1
M34	A8M5-2572	C161022-18	Solid	10/12/2016 10:30:00 AM	200.7, 200.8, 245.1
Mineral-					200.7, 200.8, 245.1
Abv Browns	A8M5-2579	C161022-19	Solid	10/17/2016 3:30:00 PM	
Gulch					
Picayne Gulch	A8M5-2562	C161022-20	Solid	10/5/2016 11:00:00 AM	200.7, 200.8, 245.1

1



Placer Gulch	A8M5-2568	C161022-21	Solid	10/10/2016 1:00:00 PM	200.7, 200.8, 245.1
SF Animas River	A8M5-2567	C161022-22	Solid	10/8/2016 12:00:00 PM	200.7, 200.8, 245.1
SF Mineral- Below CG	A8M5-2575	C161022-23	Solid	10/13/2016 3:00:00 PM	200.7, 200.8, 245.1

It should be noted that the reviewer used laboratory sample names to identify specific sample fractions in this report.

II. Sample Management

Anomalies with sample management are noted below. The samples were received within the temperature limits of >0°C to <6°C. According to the Sample Receipt Form (SRF) the samples were received intact and properly preserved. The chains of custody (COC) were signed and dated by field and/or laboratory personnel.

The following issue was noted:

- Custody seals were absent.
- Requested analyses were not listed on the COC; however, the Technical Direction From (TDR) included requested analyses for this matrix (tissue).

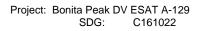


Data Qualifier Reference Table

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins or PCB congeners.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
J+	Not applicable	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample, and may have a potential positive bias.
J-	Not applicable	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample, and may have a potential negative bias.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.



Qualifier	Organics	Inorganics
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.





Qualification Code Reference Table

Qualifier	Organics	Inorganics
Н	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used for the calibration was incorrect
С	Calibration %RSD or %D was noncompliant.	Correlation coefficient is < 0.995 or calibration was noncompliant.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
В	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
L1	LCS/LCSD RPD was outside control limits.	LCS/LCSD RPD was outside control limits.
Q	MS/MSD recovery was poor.	MS recovery was poor.
Q1	MS/MSD RPD was outside control limits.	MS/MSD RPD was outside control limits.
Е	Not applicable.	Duplicates showed poor agreement.
1	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
Α	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	ICPMS tune was not compliant.
Т	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present.	Not applicable.
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
F1	Field duplicate results were outside the control limit.	Field duplicate results were outside the control limit.
\$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.



Qualifier	Organics	Inorganics
D	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
Р	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
*11, *111	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.



III. Method Analyses

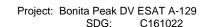
A. Methods 200.7, 200.8, and 245.1—Metals and Mercury

Reviewed By: M. Hilchey

Date Reviewed: December 29, 2016

The samples listed in Table 1 for these analyses were validated based on the guidelines outlined in the Quality Assurance Project Plan for U. S. EPA Region 8 CERCLA Site Assessment (Rev. 2015); United States Environmental Protection Agency Method 200.7, 200.8 and 245.1; and the National Functional Guidelines for Inorganic Superfund Data Review (2014).

- Holding Times: The analytical holding times, 28 days for mercury and six months for the remaining metals, were met with the following exceptions. All samples except 161022-12, C161022-13 and 161022-19 were analyzed past the required holding time but within 2x the requirement for mercury. All results for mercury for those samples were qualified as estimated with low potential bias (UJ for nondetects, J- for detects).
- Instrument tune: All ICPMS tuning requirements were met.
- Calibration:
 - Initial calibration: Initial instrument calibrations met method acceptance requirements.
 - Initial (ICV) and continuing calibration (CCV) verification: The ICV and CCV frequency requirements were met. ICV and CCV recoveries were within 90-110%. The reporting limit check standards met laboratory recovery limits.
- Method Blanks: No target analytes were detected in the method blanks or calibration blanks.
- Interference Check Samples (ICSA/B): Recoveries were within the control limits of 80-120% or ±2× the reporting limit, whichever is greater. For all site samples, the concentrations of more than half of the interferents were less than half of the concentrations of interferents in the ICSA; therefore, the samples were not assessed for matrix interference.
- Laboratory Control Samples (LCS): The LCS recoveries were within the laboratory control limits for all target analytes with the exception of strontium (13%) in both ICP preparation batches. Strontium results for all samples were qualified as estimated with low potential bias (R for nondetects, J- for detects).
- Laboratory Duplicates: Laboratory duplicate analyses were performed on samples C161022-11 and C161022-22 for all analyses. All RPDs met the laboratory control limit of ≤20% for sample results <5x RL with the exceptions noted in the table below. Associated results for all samples of similar matrix except those which had passing duplicate results, and except those that were rejected due to other QC failure, were qualified as estimated with unknown bias (J for detects, UJ for nondetects).





Target analyte	Laboratory Duplicate RPD	Qualified samples
arsenic	26%	All samples except C161022-11
aluminum	24%	
calcium	21%	
magnesium	25%	All samples except C161022-22
zinc	33%	
strontium	44%	

• Matrix Spike: Matrix spike analyses were performed on samples C161022-11, C161022-12 and C161022-22 for Methods 200.7 and 200.8. Recoveries were not assessed when the parent sample concentrations were more than 4× the spike amount. Recoveries for all target analytes met laboratory control limits of 70-130% except as noted in the table below. Associated nondetected strontium results which were not previously rejected due to other QC failures were rejected (R). Detected results associated with high MS recoveries were qualified as estimated with high potential bias (J+).

Target analyte	Matrix Spike recovery	Qualified samples
aluminum	171%	All samples except C161022-12 and C161022-22
strontium	0.6%	All Samples except 6101022-12 and 6101022-22
iron	170%	All samples except C161022-11 and C161022-22
silica	393%/142%	All samples except C161022-12

- Post Digestion Spike: Post digestion spike analyses were not performed.
- Serial Dilution: Serial dilution analysis was performed on samples C161022-11 and C161022-22 for Methods 200.7 and 200.8. Results were not assessed unless the parent sample concentration was >50× the MDL. The control limit of ≤10% difference of the original sample results was met for all target analytes.
- Internal Standards: All site sample ICPMS internal standard (IS) intensities were within 60-125% of the response in the calibration blank for reported target analytes.
- Sample Result Verification: Sample results were verified for all samples reviewed at validation Stage 4. Detects below the reporting limit were qualified as estimated (J). Nondetects are valid to the RL.
 - All samples were diluted 5x for 200.7 and 200.8 analyses. Detected results for dilutions were flagged with "D" by the laboratory. Reporting limits were adjusted accordingly.
 - The laboratory flagged the mercury result for sample C161022-11 as diluted; however, review of the raw data indicates that the sample was not diluted for Method 245.1.
- Field QC Samples: MEC^x evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^x used the

remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below.

- o Field Blanks and Equipment Blanks: No field blanks or equipment blank samples were identified for this SDG.
- o Field Duplicates: There were no field duplicate samples identified for this SDG.

Validated Sample Result Forms C161022

Analysis Method ICPMS Tot. Rec. Metals C161022-01 **Sample No:** A8M5-2565 Lab Sample Name: **Sample Date:** 10/7/2016 1:00:00 PM A05 Location Matrix Type: Solid (dry wt basis) CAS No Analyte Result Sample Sample Validation Validation Result Lab Value Adjusted Adjusted Units Qualifier Qualifier Notes **CROL MDL** 7440-36-0 68.0 126 62.8 ug/kg dry JD J Antimony 7440-38-2 251 E Arsenic 2070 62.8 ug/kg dry Cadmium 7440-43-9 1520 25.1 12.6 ug/kg dry D Chromium 7440-47-3 673 251 126 ug/kg dry D Copper 7440-50-8 5460 126 62.8 ug/kg dry Lead 7439-92-1 5970 25.1 12.6 ug/kg dry Nickel 7440-02-0 274 126 62.8 ug/kg dry D Selenium 7782-49-2 422 251 126 ug/kg dry Silver 7440-22-4 94.5 126 62.8 ug/kg dry JD J Thallium 164 251 7440-28-0 126 ug/kg dry JD J 45.5 Uranium 7440-61-1 25.1 12.6 ug/kg dry Lab Sample Name: C161022-02 Sample No: A8M5-2566 Sample Date: 10/7/2016 11:00:00 AM Location A07 Matrix Type: Solid (dry wt basis) Analyte CAS No Result Sample Sample Validation Validation Result Lab Adjusted Value Adjusted Units Qualifier Qualifier **Notes CROL MDL** Antimony 7440-36-0 < 597 597 298 ug/kg dry U U Arsenic 7440-38-2 298 JD E 1120 1190 ug/kg dry Cadmium 7440-43-9 307 119 59.7 ug/kg dry Chromium 7440-47-3 <1190 1190 597 ug/kg dry U Copper 7440-50-8 15900 597 298 ug/kg dry D Lead 7439-92-1 13300 119 59.7 ug/kg dry Nickel 7440-02-0 < 597 597 298 ug/kg dry U U U Selenium 7782-49-2 <1190 1190 597 U ug/kg dry Silver 7440-22-4 313 597 298 JD J ug/kg dry Thallium 7440-28-0 <1190 1190 597 ug/kg dry U Uranium 7440-61-1 3370 119 59.7 ug/kg dry **Sample Date:** 10/6/2016 10:00:00 AM C161022-03 A8M5-2564 Lab Sample Name: Sample No: A34 Location Matrix Type: Solid (dry wt basis) Analyte CAS No Result Sample Sample Result Lab Validation Validation Value Adjusted Adjusted Units Qualifier Qualifier **Notes CRQL MDL** Antimony 7440-36-0 <248 124 ug/kg dry U U 496 Arsenic 7440-38-2 754 124 ug/kg dry D J Е Cadmium 7440-43-9 1620 49.6 24.8 ug/kg dry D Chromium 7440-47-3 722 496 248 ug/kg dry Copper 7440-50-8 31500 248 124 ug/kg dry

Wednesday, January 04, 2017 Page 1 of 19

Analysis Method	ICPMS Tot. Rec. Metals

Arsenic		7440-38-2	449	249	62.3	ug/kg dry D	J	Е
Antimony		7440-36-0	<125	125	62.3	ug/kg dry U	U	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Lab Units Qualifier	Validation Qualifier	Validation Notes
Location	A45				Matrix Ty	pe: Solid (dry wt basis)	
Lab Sample Name:	C161022-06	Sampl	le No: A8M5	-2559		Sample Date: 10/4/2	2016 10:00:00 A	AM
Jranium		7440-61-1	<24.3	24.3	12.2	ug/kg dry U	U	
hallium		7440-28-0	<243	243	122	ug/kg dry U	U	
Silver		7440-22-4	<122	122	60.8	ug/kg dry U	U	
Selenium		7782-49-2	895	243	122	ug/kg dry D		
Nickel		7440-02-0	105	122	60.8	ug/kg dry JD	J	
Lead		7439-92-1	543	24.3	12.2	ug/kg dry D		
Copper		7440-50-8	4270	122	60.8	ug/kg dry D		
Chromium		7440-47-3	501	243	122	ug/kg dry D		
Cadmium		7440-43-9	223	24.3	12.2	ug/kg dry D		
Arsenic		7440-38-2	229	243	60.8	ug/kg dry JD	J	Е
Antimony		7440-36-0	<122	122	60.8	ug/kg dry U	U	
Location Analyte	A43	CAS No	Result Value	Sample Adjusted CRQL	Matrix Ty Sample Adjusted MDL	pe: Solid (dry wt basis Result Lab Units Qualifier	Validation	Validation Notes
Lab Sample Name:		Sampl	E INO: MOIVIS	-2301		_		V1
Jranium	C161022-05	7440-61-1	14.4 le No: A8M5	24.4	12.2	ug/kg dry JD Sample Date: 10/4/2	J 2016 2:00:00 DN	м
Thallium		7440-28-0	<244	244	122	ug/kg dry U	Ŭ	
Silver		7440-22-4	187	122	61.0	ug/kg dry D		
Selenium		7782-49-2	233	244	122	ug/kg dry JD	J	
Nickel		7440-02-0	338	122	61.0	ug/kg dry D		
Lead		7439-92-1	34400	24.4	12.2	ug/kg dry D		
Copper		7440-50-8	57200	122	61.0	ug/kg dry D		
Chromium		7440-47-3	484	244	122	ug/kg dry D		
Cadmium		7440-43-9	1090	24.4	12.2	ug/kg dry D		
Arsenic		7440-38-2	330	244	61.0	ug/kg dry D	J	E
Antimony		7440-36-0	<122	122	61.0	ug/kg dry U	U	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Lab Units Qualifier	Validation Qualifier	Validation Notes
Location	A37				Matrix Ty	pe: Solid (dry wt basis)	
Lab Sample Name:	C161022-04	Sampl	e No: A8M5	5-2563		Sample Date: 10/6/2	2016 1:00:00 PI	M
Uranium		7440-61-1	41.2	49.6	24.8	ug/kg dry JD	J	
Thallium		7440-28-0	<496	496	248	ug/kg dry U	U	
Silver		7440-22-4	<248	248	124	ug/kg dry U	U	
Selenium		7782-49-2	316	496	248	ug/kg dry JD	J	
Nickel		7440-02-0	622	248	124	ug/kg dry D		
Lead		7439-92-1	7640	49.6	24.8	ug/kg dry D		

Wednesday, January 04, 2017 Page 2 of 19

Cadmium		7440-43-9	970	24.9	12.5	ug/kg dr	y D		
Chromium		7440-47-3	616	249	125	ug/kg dr	y D		
Copper		7440-50-8	19700	125	62.3	ug/kg dr	y D		
Lead		7439-92-1	10600	24.9	12.5	ug/kg dr	y D		
Nickel		7440-02-0	245	125	62.3	ug/kg dr	y D		
Selenium		7782-49-2	351	249	125	ug/kg dr	y D		
Silver		7440-22-4	99.8	125	62.3	ug/kg dr	y JD	J	
Thallium		7440-28-0	<249	249	125	ug/kg dr	y U	U	
Uranium		7440-61-1	115	24.9	12.5	ug/kg dr	y D		
Lab Sample Name:	C161022-07	Sampl	e No: A8M5	5-2560		Sample Da	te: 10/4/2	016 1:00:00 PM	M
Location	A48				Matrix Ty	pe: Solid (d	lry wt basis))	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Antimony		7440-36-0	<123	123	61.5	ug/kg dr	y U	U	
Arsenic		7440-38-2	431	246	61.5	ug/kg dr	y D	J	E
Cadmium		7440-43-9	1340	24.6	12.3	ug/kg dr	y D		
Chromium		7440-47-3	531	246	123	ug/kg dr	y D		
Copper		7440-50-8	29000	123	61.5	ug/kg dr	y D		
Lead		7439-92-1	8520	24.6	12.3	ug/kg dr	y D		
Nickel		7440-02-0	103	123	61.5	ug/kg dr	y JD	J	
Selenium		7782-49-2	667	246	123	ug/kg dr	y D		
Silver		7440-22-4	283	123	61.5	ug/kg dr	y D		
Thallium		7440-28-0	<246	246	123	ug/kg dr	y U	U	
Uranium		7440-61-1	20.6	24.6	12.3	ug/kg dr	y JD	J	
Lab Sample Name:	C161022-08	Sampl	e No: A8M5	-2558		Sample Da	te: 10/3/2	016 12:00:00 F	PM
Location	A56				Matrix Typ	pe: Solid (d	lry wt basis))	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Antimony		7440-36-0	<118	118	59.0	ug/kg dr	y U	U	
Arsenic		7440-38-2	178	236	59.0	ug/kg dr	y JD	J	Е
Cadmium		7440-43-9	585	23.6	11.8	ug/kg dr	y D		
Chromium		7440-47-3	552	236	118	ug/kg dr	y D		
Copper		7440-50-8	11600	118	59.0	ug/kg dr	y D		
Соррег		7440 50 0							
		7439-92-1	3460	23.6	11.8	ug/kg dr	y D		
Lead				23.6 118	11.8 59.0	ug/kg dr ug/kg dr			
Lead Nickel		7439-92-1	3460				y D		
Lead Nickel Selenium Silver		7439-92-1 7440-02-0	3460 188	118	59.0	ug/kg dr	y D y D	U	
Lead Nickel Selenium		7439-92-1 7440-02-0 7782-49-2	3460 188 414	118 236	59.0 118	ug/kg dr ug/kg dr	y D y D y U	U	

Wednesday, January 04, 2017 Page 3 of 19

Lab Sample Name: C161022-09 **Sample No:** A8M5-2569 **Sample Date:** 10/11/2016 2:00:00 PM

Location An Rv-abv Eureka **Matrix Type:** Solid (dry wt basis)

Analyte	CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Lab Units Qualifier	Validation Qualifier	Validation Notes
Antimony	7440-36-0	<265	265	132	ug/kg dry U	U	
Arsenic	7440-38-2	212	529	132	ug/kg dry JD	J	Е
Cadmium	7440-43-9	769	52.9	26.5	ug/kg dry D		
Chromium	7440-47-3	414	529	265	ug/kg dry JD	J	
Copper	7440-50-8	26200	265	132	ug/kg dry D		
Lead	7439-92-1	2960	52.9	26.5	ug/kg dry D		
Nickel	7440-02-0	<265	265	132	ug/kg dry U	U	
Selenium	7782-49-2	<529	529	265	ug/kg dry U	U	
Silver	7440-22-4	<265	265	132	ug/kg dry U	U	
Thallium	7440-28-0	<529	529	265	ug/kg dry U	U	
Uranium	7440-61-1	295	52.9	26.5	ug/kg dry D		

Lab Sample Name: C161022-10 **Sample No:** A8M5-2570 **Sample Date:** 10/11/2016 10:30:00 AM

Location An RV-Abv Minnie Matrix Type: Solid (dry wt basis)

Analyte	CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Lab Units Qualifier	Validation Qualifier	Validation Notes
Antimony	7440-36-0	79.8	135	67.7	ug/kg dry JD	J	
Arsenic	7440-38-2	898	271	67.7	ug/kg dry D	J	Е
Cadmium	7440-43-9	1120	27.1	13.5	ug/kg dry D		
Chromium	7440-47-3	580	271	135	ug/kg dry D		
Copper	7440-50-8	30700	135	67.7	ug/kg dry D		
Lead	7439-92-1	10500	27.1	13.5	ug/kg dry D		
Nickel	7440-02-0	296	135	67.7	ug/kg dry D		
Selenium	7782-49-2	226	271	135	ug/kg dry JD	J	
Silver	7440-22-4	108	135	67.7	ug/kg dry JD	J	
Thallium	7440-28-0	<271	271	135	ug/kg dry U	U	
Uranium	7440-61-1	401	27.1	13.5	ug/kg dry D		

Lab Sample Name: C161022-11 **Sample No:** A8M5-2557 **Sample Date:** 9/30/2016 10:00:00 AM

 Location
 Hermosa Cr
 Matrix Type:
 Solid (dry wt basis)

Analyte	CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Lab Units Qualifier		Validation Notes
Antimony	7440-36-0	<123	123	61.4	ug/kg dry U	U	_
Arsenic	7440-38-2	139	246	61.4	ug/kg dry JD	J	
Cadmium	7440-43-9	30.3	24.6	12.3	ug/kg dry D		
Chromium	7440-47-3	556	246	123	ug/kg dry D		
Copper	7440-50-8	3780	123	61.4	ug/kg dry D		
Lead	7439-92-1	83.3	24.6	12.3	ug/kg dry D		
Nickel	7440-02-0	115	123	61.4	ug/kg dry JD	J	
Selenium	7782-49-2	855	246	123	ug/kg dry D		

Wednesday, January 04, 2017 Page 4 of 19

Silver		7440-22-4	<123	123	61.4	ug/kg dry U	U	
Thallium		7440-28-0	<246	246	123	ug/kg dry U	U	
Uranium		7440-61-1	24.0	24.6	12.3	ug/kg dry JD	J	
Lab Sample Name:	C161022-12	Sample	No: A8M5	-2578		Sample Date: 10/17	7/2016 1:00:00 F	PM
Location	M08				Matrix Ty	pe: Solid (dry wt basis	3)	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Lab Units Qualifier	Validation Qualifier	Validation Notes
Antimony		7440-36-0	<125	125	62.5	ug/kg dry U	U	
Arsenic		7440-38-2	312	250	62.5	ug/kg dry D	J	Е
Cadmium		7440-43-9	258	25.0	12.5	ug/kg dry D		
Chromium		7440-47-3	487	250	125	ug/kg dry D		
Copper		7440-50-8	5180	125	62.5	ug/kg dry D		
Lead		7439-92-1	4420	25.0	12.5	ug/kg dry D		
Nickel		7440-02-0	153	125	62.5	ug/kg dry D		
Selenium		7782-49-2	336	250	125	ug/kg dry D		
Silver		7440-22-4	<125	125	62.5	ug/kg dry U	U	
Thallium		7440-28-0	128	250	125	ug/kg dry JD	J	
Uranium		7440-61-1	151	25.0	12.5	ug/kg dry D		
Lab Sample Name:	C161022-13	Sample	No: A8M5	-2577		Sample Date: 10/17	//2016 10:30:00	AM
Location	M10a				Matrix Ty	pe: Solid (dry wt basis	3)	
Analyte		CAS No	Result Value	Sample Adjusted	Sample Adjusted	Result Lab Units Qualifier	Validation Qualifier	Validation Notes
				CKQL	\mathbf{MDL}		_	
Antimony		7440-36-0	<135	CRQL 135	MDL 67.4	ug/kg dry U	U	
•		7440-36-0 7440-38-2	<135 2550			ug/kg dry U	U	Е
Arsenic				135	67.4			Е
Arsenic Cadmium		7440-38-2	2550	135 270	67.4 67.4	ug/kg dry D		Е
Arsenic Cadmium Chromium		7440-38-2 7440-43-9	2550 366	135 270 27.0	67.4 67.4 13.5	ug/kg dry D ug/kg dry D		Е
Arsenic Cadmium Chromium Copper		7440-38-2 7440-43-9 7440-47-3	2550 366 437	135 270 27.0 270	67.4 67.4 13.5 135	ug/kg dry D ug/kg dry D ug/kg dry D		Е
Arsenic Cadmium Chromium Copper Lead		7440-38-2 7440-43-9 7440-47-3 7440-50-8	2550 366 437 58700	135 270 27.0 270 135	67.4 67.4 13.5 135 67.4	ug/kg dry D ug/kg dry D ug/kg dry D ug/kg dry D		Е
Arsenic Cadmium Chromium Copper Lead Nickel		7440-38-2 7440-43-9 7440-47-3 7440-50-8 7439-92-1	2550 366 437 58700 166000	135 270 27.0 270 135 27.0	67.4 67.4 13.5 135 67.4 13.5	ug/kg dry D		Е
Arsenic Cadmium Chromium Copper Lead Nickel Selenium		7440-38-2 7440-43-9 7440-47-3 7440-50-8 7439-92-1 7440-02-0	2550 366 437 58700 166000 204	135 270 27.0 27.0 135 27.0	67.4 67.4 13.5 135 67.4 13.5	ug/kg dry D	J	Е
Arsenic Cadmium Chromium Copper Lead Nickel Selenium		7440-38-2 7440-43-9 7440-47-3 7440-50-8 7439-92-1 7440-02-0 7782-49-2	2550 366 437 58700 166000 204	135 270 27.0 270 135 27.0 135 270	67.4 67.4 13.5 135 67.4 13.5 67.4	ug/kg dry D	1	В
Arsenic Cadmium Chromium Copper Lead Nickel Selenium Silver		7440-38-2 7440-43-9 7440-47-3 7440-50-8 7439-92-1 7440-02-0 7782-49-2 7440-22-4 7440-28-0 7440-61-1	2550 366 437 58700 166000 204 177 67.9 <270 67.9	135 270 27.0 270 135 27.0 135 270 135 270 270	67.4 67.4 13.5 135 67.4 13.5 67.4 135	ug/kg dry D ug/kg dry JD ug/kg dry JD	1	В
Arsenic Cadmium Chromium Copper Lead Nickel Selenium Silver Thallium Uranium	C161022-14	7440-38-2 7440-43-9 7440-47-3 7440-50-8 7439-92-1 7440-02-0 7782-49-2 7440-22-4 7440-28-0 7440-61-1	2550 366 437 58700 166000 204 177 67.9 <270	135 270 27.0 270 135 27.0 135 270 135 270 270	67.4 67.4 13.5 135 67.4 13.5 67.4 135	ug/kg dry D ug/kg dry JD ug/kg dry JD ug/kg dry U	1 1 1	
Arsenic Cadmium Chromium Copper Lead Nickel Selenium Silver Thallium Uranium	C161022-14 M14B	7440-38-2 7440-43-9 7440-47-3 7440-50-8 7439-92-1 7440-02-0 7782-49-2 7440-22-4 7440-28-0 7440-61-1	2550 366 437 58700 166000 204 177 67.9 <270 67.9	135 270 27.0 270 135 27.0 135 270 135 270 270	67.4 67.4 13.5 135 67.4 13.5 67.4 135 13.5	ug/kg dry D ug/kg dry JD ug/kg dry JD ug/kg dry U ug/kg dry D	J J U	
Arsenic Cadmium Chromium Copper Lead Nickel Selenium Silver Thallium Uranium Lab Sample Name: Location		7440-38-2 7440-43-9 7440-47-3 7440-50-8 7439-92-1 7440-02-0 7782-49-2 7440-22-4 7440-28-0 7440-61-1	2550 366 437 58700 166000 204 177 67.9 <270 67.9	135 270 27.0 270 135 27.0 135 270 135 270 270	67.4 67.4 13.5 135 67.4 13.5 67.4 135 13.5	ug/kg dry D ug/kg dry JD ug/kg dry JD ug/kg dry U ug/kg dry U ug/kg dry D Sample Date: 10/14 pe: Solid (dry wt basis	J J U	·M
Arsenic Cadmium Chromium Copper Lead Nickel Selenium Silver Thallium Uranium Lab Sample Name: Location Analyte		7440-38-2 7440-43-9 7440-47-3 7440-50-8 7439-92-1 7440-02-0 7782-49-2 7440-22-4 7440-28-0 7440-61-1 Sample	2550 366 437 58700 166000 204 177 67.9 <270 67.9 No: A8M5	135 270 27.0 270 135 27.0 135 27.0 135 270 27.0 135 270 435 270 27.0 -2576 Sample Adjusted	67.4 67.4 13.5 135 67.4 13.5 67.4 135 67.4 135 Matrix Ty Sample Adjusted	ug/kg dry D ug/kg dry JD ug/kg dry JD ug/kg dry U ug/kg dry U ug/kg dry D Sample Date: 10/14 pe: Solid (dry wt basis	J J U -/2016 2:00:00 F	^{PM} Validation
Arsenic Cadmium Chromium Copper Lead Nickel Selenium Silver Thallium Uranium Lab Sample Name: Location Analyte		7440-38-2 7440-43-9 7440-47-3 7440-50-8 7439-92-1 7440-02-0 7782-49-2 7440-28-0 7440-61-1 Sample CAS No	2550 366 437 58700 166000 204 177 67.9 <270 67.9 No: A8M5 Result Value	135 270 27.0 270 135 27.0 135 270 135 270 27.0 435 270 27.0 435 270 27.0 44 CRQL	67.4 67.4 13.5 135 67.4 13.5 67.4 135 67.4 135 13.5 Matrix Ty Sample Adjusted MDL	ug/kg dry D ug/kg dry JD ug/kg dry JD ug/kg dry U ug/kg dry D Sample Date: 10/14 pe: Solid (dry wt basis Result Lab Units Qualifier	J J U 2/2016 2:00:00 F Validation Qualifier	^{PM} Validation
_		7440-38-2 7440-43-9 7440-47-3 7440-50-8 7439-92-1 7440-02-0 7782-49-2 7440-22-4 7440-61-1 Sample CAS No	2550 366 437 58700 166000 204 177 67.9 <270 67.9 No: A8M5 Result Value <122	135 270 27.0 270 135 27.0 135 27.0 135 270 27.0 435 270 27.0 44 CRQL 122	67.4 67.4 13.5 135 67.4 13.5 67.4 135 67.4 135 13.5 Matrix Ty Sample Adjusted MDL 60.9	ug/kg dry D ug/kg dry JD ug/kg dry JD ug/kg dry U ug/kg dry D Sample Date: 10/14 pe: Solid (dry wt basis Result Lab Units Qualifier	J J U 2/2016 2:00:00 F Validation Qualifier U	PM Validation Notes
Arsenic Cadmium Chromium Copper Lead Nickel Selenium Silver Thallium Uranium Lab Sample Name: Location Analyte Antimony Arsenic		7440-38-2 7440-43-9 7440-47-3 7440-50-8 7440-02-0 7782-49-2 7440-22-4 7440-28-0 7440-61-1 Sample CAS No 7440-36-0 7440-38-2	2550 366 437 58700 166000 204 177 67.9 <270 67.9 No: A8M5 Result Value <122 480	135 270 27.0 270 135 27.0 135 270 135 270 27.0 27.0 435 270 27.0 443 4djusted CRQL 122 243	67.4 67.4 13.5 135 67.4 13.5 67.4 135 67.4 135 13.5 Matrix Ty Sample Adjusted MDL 60.9 60.9	ug/kg dry D ug/kg dry JD ug/kg dry JD ug/kg dry U ug/kg dry D Sample Date: 10/14 pe: Solid (dry wt basis Result Lab Units Qualifier ug/kg dry U ug/kg dry D	J J U 2/2016 2:00:00 F Validation Qualifier U	PM Validation Notes

Analysis Method	ICPMS Tot.	Rec.	Metals
11:000 / 505 1:100:00			1.100000

Lead		7439-92-1	8020	24.3	12.2	ug/kg dı	y D		
Nickel		7440-02-0	112	122	60.9	ug/kg dı	y JD	J	
Selenium		7782-49-2	302	243	122	ug/kg dı	y D		
Silver		7440-22-4	<122	122	60.9	ug/kg dr	y U	U	
Thallium		7440-28-0	<243	243	122	ug/kg dı	y U	U	
Uranium		7440-61-1	50.7	24.3	12.2	ug/kg dr	y D		
Lab Sample Name:	C161022-15	Sampl	e No: A8M5	5-2574		Sample Da	te: 10/13/	/2016 12:30:00	PM
Location	M27				Matrix Ty	pe: Solid (d	lry wt basis))	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Antimony		7440-36-0	<1260	1260	630	ug/kg dı	y U	U	
Arsenic		7440-38-2	<2520	2520	630	ug/kg dı	y U	UJ	Е
Cadmium		7440-43-9	<252	252	126	ug/kg dı	y U	U	
Chromium		7440-47-3	<2520	2520	1260	ug/kg dı	y U	U	
Copper		7440-50-8	5460	1260	630	ug/kg dr	y D		
Lead		7439-92-1	8200	252	126	ug/kg dı	y D		
Nickel		7440-02-0	<1260	1260	630	ug/kg dı	y U	U	
Selenium		7782-49-2	<2520	2520	1260	ug/kg dı	y U	U	
Silver		7440-22-4	<1260	1260	630	ug/kg dr	y U	U	
Thallium		7440-28-0	<2520	2520	1260	ug/kg dı	y U	U	
Uranium		7440-61-1	<252	252	126	ug/kg dr	y U	U	
Uranium Lab Sample Name:	C161022-16	7440-61-1 Sampl					•	U /2016 10:00:00	AM
	C161022-16 M28					Sample Da	te: 10/13/	/2016 10:00:00	AM
Lab Sample Name: Location				Sample Adjusted		Sample Da pe: Solid (control Result	te: 10/13/ lry wt basis) Lab	/2016 10:00:00	
Lab Sample Name: Location Analyte		Sampl	e No: A8M5 Result	5-2573 Sample	Matrix Ty Sample Adjusted	Sample Da pe: Solid (control Result	te: 10/13/ dry wt basis) Lab Qualifier	/2016 10:00:00 Validation	Validation
Lab Sample Name: Location Analyte Antimony		Sampl CAS No	e No: A8M5 Result Value	Sample Adjusted CRQL	Matrix Ty Sample Adjusted MDL	Sample Da pe: Solid (c Result Units	te: 10/13/ lry wt basis) Lab Qualifier y U	Validation Qualifier	Validation
Lab Sample Name: Location Analyte Antimony Arsenic		Sampl CAS No 7440-36-0	Result Value	Sample Adjusted CRQL	Matrix Ty Sample Adjusted MDL 58.3	Sample Da pe: Solid (c Result Units ug/kg dr	te: 10/13/ lry wt basis) Lab Qualifier y U y D	Validation Qualifier	Validation Notes
Lab Sample Name: Location Analyte Antimony Arsenic Cadmium		Sampl CAS No 7440-36-0 7440-38-2	Result Value	Sample Adjusted CRQL 117 233	Matrix Ty Sample Adjusted MDL 58.3 58.3	Sample Da pe: Solid (c Result Units ug/kg dr ug/kg dr	te: 10/13/ lry wt basis; Lab Qualifier y U y D y D	Validation Qualifier	Validation Notes
Lab Sample Name: Location Analyte Antimony Arsenic Cadmium Chromium		Sampl CAS No 7440-36-0 7440-38-2 7440-43-9	Result Value <117 354	Sample Adjusted CRQL 117 233 23.3	Matrix Ty Sample Adjusted MDL 58.3 58.3	Sample Da pe: Solid (c Result Units ug/kg dr ug/kg dr ug/kg dr	te: 10/13/ lry wt basis; Lab Qualifier y U y D y D y D	Validation Qualifier	Validation Notes
Lab Sample Name: Location Analyte Antimony Arsenic Cadmium Chromium Copper		Sampl CAS No 7440-36-0 7440-38-2 7440-43-9 7440-47-3	Result Value <117 354 111 786	Sample Adjusted CRQL 117 233 23.3 233	Matrix Ty Sample Adjusted MDL 58.3 58.3 11.7	Sample Da pe: Solid (c Result Units ug/kg dr ug/kg dr ug/kg dr ug/kg dr	te: 10/13/ lry wt basis; Lab Qualifier y U y D y D y D y D	Validation Qualifier	Validation Notes
Lab Sample Name: Location Analyte Antimony Arsenic Cadmium Chromium Copper Lead		Sampl CAS No 7440-36-0 7440-38-2 7440-43-9 7440-47-3 7440-50-8	Result Value <117 354 111 786 7920	Sample Adjusted CRQL 117 233 23.3 233	Matrix Ty Sample Adjusted MDL 58.3 58.3 11.7 117 58.3	Sample Da pe: Solid (c Result Units ug/kg dr ug/kg dr ug/kg dr ug/kg dr ug/kg dr	te: 10/13/ lry wt basis; Lab Qualifier y U y D y D y D y D y D y D	Validation Qualifier	Validation Notes
Lab Sample Name: Location Analyte Antimony Arsenic Cadmium Chromium Copper Lead Nickel		Sampl CAS No 7440-36-0 7440-38-2 7440-43-9 7440-47-3 7440-50-8 7439-92-1	Result Value <117 354 111 786 7920 702	Sample Adjusted CRQL 117 233 23.3 23.3 117 23.3	Matrix Ty Sample Adjusted MDL 58.3 58.3 11.7 117	Sample Da pe: Solid (c Result Units ug/kg dr ug/kg dr ug/kg dr ug/kg dr ug/kg dr ug/kg dr	te: 10/13, lry wt basis; Lab Qualifier y U y D y D y D y D y D y D y D	Validation Qualifier	Validation Notes
Lab Sample Name: Location Analyte Antimony Arsenic Cadmium Chromium Copper Lead Nickel Selenium		Sampl CAS No 7440-36-0 7440-38-2 7440-43-9 7440-47-3 7440-50-8 7439-92-1 7440-02-0	Result Value <117 354 111 786 7920 702 267	Sample Adjusted CRQL 117 233 23.3 117 23.3	Matrix Tyj Sample Adjusted MDL 58.3 58.3 11.7 58.3 11.7 58.3	Sample Da pe: Solid (c Result Units ug/kg dr	te: 10/13/ lry wt basis; Lab Qualifier y U y D y D y D y D y D y D y D y D y D	Validation Qualifier	Validation Notes
Lab Sample Name: Location Analyte Antimony Arsenic Cadmium Chromium Copper Lead Nickel Selenium Silver		Sampl CAS No 7440-36-0 7440-38-2 7440-43-9 7440-47-3 7440-50-8 7439-92-1 7440-02-0 7782-49-2	Result Value <117 354 111 786 7920 702 267 488	Sample Adjusted CRQL 117 233 23.3 23.3 117 23.3 117 23.3	Matrix Ty Sample Adjusted MDL 58.3 58.3 11.7 117 58.3 11.7	Sample Da pe: Solid (d Result Units ug/kg dr	te: 10/13, lry wt basis; Lab Qualifier y U y D y D y D y D y D y D y D y D y D y D	Validation Qualifier U	Validation Notes
Lab Sample Name: Location Analyte Antimony Arsenic Cadmium Chromium Copper Lead Nickel Selenium Silver Thallium		Sampl CAS No 7440-36-0 7440-38-2 7440-43-9 7440-47-3 7440-50-8 7439-92-1 7440-02-0 7782-49-2 7440-22-4	Result Value <117 354 111 786 7920 702 267 488 <117	Sample Adjusted CRQL 117 233 23.3 23.3 117 23.3 117 233 117	Matrix Ty Sample Adjusted MDL 58.3 58.3 11.7 58.3 11.7 58.3 117 58.3	Sample Da pe: Solid (c Result Units ug/kg dr	te: 10/13/ lry wt basis; Lab Qualifier y U y D y D y D y D y D y D y D y D y D y D	Validation Qualifier U J	Validation Notes
Lab Sample Name: Location Analyte Antimony Arsenic Cadmium Chromium Copper Lead Nickel Selenium Silver Thallium		Sampl CAS No 7440-36-0 7440-38-2 7440-43-9 7440-47-3 7440-50-8 7439-92-1 7440-02-0 7782-49-2 7440-22-4 7440-28-0	Result Value <117 354 111 786 7920 702 267 488 <117 <233 44.9	Sample Adjusted CRQL 117 233 23.3 23.3 117 23.3 117 233 117 233 23.3	Matrix Tyy Sample Adjusted MDL 58.3 58.3 11.7 117 58.3 117 58.3 117 117	Sample Da pe: Solid (o Result Units ug/kg dr	te: 10/13/ lry wt basis; Lab Qualifier y U y D y D y D y D y D y D y D y D y D y D	Validation Qualifier U J	Validation Notes
Lab Sample Name: Location Analyte Antimony Arsenic Cadmium Chromium Copper Lead Nickel Selenium Silver Thallium Uranium	M28	Sampl CAS No 7440-36-0 7440-38-2 7440-43-9 7440-47-3 7440-50-8 7439-92-1 7440-02-0 7782-49-2 7440-22-4 7440-28-0 7440-61-1	Result Value <117 354 111 786 7920 702 267 488 <117 <233 44.9	Sample Adjusted CRQL 117 233 23.3 23.3 117 23.3 117 233 117 233 23.3	Matrix Tyy Sample Adjusted MDL 58.3 58.3 11.7 117 58.3 117 58.3 117 117	Sample Da pe: Solid (o Result Units ug/kg dr	te: 10/13/ lry wt basis; Lab Qualifier y U y D y D y D y D y D y D y D y U y U y U y U y U te: 10/12/	Validation Qualifier U J Validation Qualifier U V V V V V V V V V V V V	Validation Notes
Analyte Antimony Arsenic Cadmium Chromium Copper Lead Nickel Selenium Silver Thallium Uranium Lab Sample Name:	M28 C161022-17	Sampl CAS No 7440-36-0 7440-38-2 7440-43-9 7440-47-3 7440-50-8 7439-92-1 7440-02-0 7782-49-2 7440-22-4 7440-28-0 7440-61-1	Result Value <117 354 111 786 7920 702 267 488 <117 <233 44.9	Sample Adjusted CRQL 117 233 23.3 23.3 117 23.3 117 233 117 233 23.3	Matrix Tyy Sample Adjusted MDL 58.3 58.3 11.7 117 58.3 11.7 58.3 117 117 117	Sample Da pe: Solid (o Result Units ug/kg dr	te: 10/13/ lry wt basis; Lab Qualifier y U y D y D y D y D y D y D y D y D y D y D	Validation Qualifier U J Validation Qualifier U V V V V V V V V V V V V	Validation Notes E
Lab Sample Name: Location Analyte Antimony Arsenic Cadmium Chromium Copper Lead Nickel Selenium Silver Thallium Uranium Lab Sample Name: Location	M28 C161022-17	Sampl CAS No 7440-36-0 7440-38-2 7440-43-9 7440-47-3 7440-50-8 7439-92-1 7440-02-0 7782-49-2 7440-22-4 7440-28-0 7440-61-1 Sampl	Result Value <117 354 111 786 7920 702 267 488 <117 <233 44.9 e No: A8M5	Sample Adjusted CRQL 117 233 23.3 23.3 117 23.3 117 233 117 233 23.3 Sample Adjusted	Matrix Ty Sample Adjusted MDL 58.3 11.7 117 58.3 11.7 58.3 117 11.7 Matrix Ty Sample Adjusted	Sample Da pe: Solid (o Result Units ug/kg dr	te: 10/13/ lry wt basis; Lab Qualifier y U y D y D y D y D y D y D y D y D y D y D	Validation Qualifier U U U Validation F U Validation U Validation	Validation Notes E

Wednesday, January 04, 2017 Page 6 of 19

•								
Cadmium		7440-43-9	293	24.7	12.4	ug/kg dry D		
Chromium		7440-47-3	460	247	124	ug/kg dry D		
Copper		7440-50-8	5160	124	61.8	ug/kg dry D		
Lead		7439-92-1	199	24.7	12.4	ug/kg dry D		
Nickel		7440-02-0	249	124	61.8	ug/kg dry D		
Selenium		7782-49-2	1100	247	124	ug/kg dry D		
Silver		7440-22-4	<124	124	61.8	ug/kg dry U	U	
Thallium		7440-28-0	<247	247	124	ug/kg dry U	U	
Uranium		7440-61-1	136	24.7	12.4	ug/kg dry D		
Lab Sample Name:	C161022-18	Sample	No: A8M5	5-2572		Sample Date: 10/12	2/2016 10:30:00	AM
Location	M34				Matrix Ty	pe: Solid (dry wt basis	s)	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Lab	Validation Qualifier	Validation Notes
Antimony		7440-36-0	<125	125	62.5	ug/kg dry U	U	
Arsenic		7440-38-2	181	250	62.5	ug/kg dry JD	J	Е
Cadmium		7440-43-9	114	25.0	12.5	ug/kg dry D		
Chromium		7440-47-3	499	250	125	ug/kg dry D		
Copper		7440-50-8	11400	125	62.5	ug/kg dry D		
Lead		7439-92-1	1670	25.0	12.5	ug/kg dry D		
Nickel		7440-02-0	74.7	125	62.5	ug/kg dry JD	J	
Selenium		7782-49-2	402	250	125	ug/kg dry D		
Silver		7440-22-4	<125	125	62.5	ug/kg dry U	U	
Thallium		7440-28-0	145	250	125	ug/kg dry JD	J	
Uranium		7440-61-1	171	25.0	12.5	ug/kg dry D		
Lab Sample Name:	C161022-19	Sample	No: A8M5	5-2579		Sample Date: 10/17	7/2016 3:30:00 I	PM
Location	Mineral-Abv	Browns Gulch			Matrix Typ	pe: Solid (dry wt basis	s)	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Lab Units Qualifier	Validation Qualifier	Validation Notes
Antimony		7440-36-0	61.1	115	57.6	ug/kg dry JD	J	
Arsenic		7440-38-2	726	230	57.6	ug/kg dry D	J	Е
Cadmium		7440-43-9	237	23.0	11.5	ug/kg dry D		
Chromium		7440-47-3	538	230	115	ug/kg dry D		
Copper		7440-50-8	18900	115	57.6	ug/kg dry D		
Lead		7439-92-1	28500	23.0	11.5	ug/kg dry D		
Nickel		7440-02-0	103	115	57.6	ug/kg dry JD	J	
Selenium		7782-49-2	309	230	115	ug/kg dry D		
							U	
Silver		7440-22-4	<115	115	57.6	ug/kg dry U	U	
Silver Thallium		7440-22-4 7440-28-0	<115	230	57.6	ug/kg dry U ug/kg dry U	U	

Wednesday, January 04, 2017 Page 7 of 19

Lab Sample Name:	C161022-20	Samp	le No: A8M5	0-2562		Sample Da	ite: 10/5/2	2016 11:00:00 A	AM		
Location	Picayne Gulch	Picayne Gulch M				Matrix Type: Solid (dry wt basis)					
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes		
Antimony		7440-36-0	<95.3	95.3	47.6	ug/kg d	ry U	U			
Arsenic		7440-38-2	1260	191	47.6	ug/kg d	ry D	J	Е		
Cadmium		7440-43-9	181	19.1	9.5	ug/kg d	ry D				
Chromium		7440-47-3	551	191	95.3	ug/kg d	ry D				
Copper		7440-50-8	3430	95.3	47.6	ug/kg d	ry D				
Lead		7439-92-1	1020	19.1	9.5	ug/kg d	ry D				
Nickel		7440-02-0	244	95.3	47.6	ug/kg d	ry D				
Selenium		7782-49-2	544	191	95.3	ug/kg d	ry D				
Silver		7440-22-4	57.7	95.3	47.6	ug/kg d	ry JD	J			
Thallium		7440-28-0	<191	191	95.3	ug/kg d	ry U	U			
Uranium		7440-61-1	<19.1	19.1	9.5	ug/kg d	ry U	U			
Lab Sample Name:	C161022-21	Sampl	le No: A8M5	5-2568		Sample Da	ate: 10/10/	/2016 1:00:00 I	PM		
Location	Placer Gulch				Matrix Typ	e: Solid (dry wt basis))			
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes		
Antimony		7440-36-0	<1920	1920	959	ug/kg d	ry U	U			
Arsenic		7440-38-2	<3830	3830	959	ug/kg d	ry U	UJ	Е		
Cadmium		7440-43-9	337	383	192	ug/kg d	ry JD	J			
Chromium		7440-47-3	<3830	3830	1920	ug/kg d	ry U	U			
Copper		7440-50-8	19800	1920	959	ug/kg d	ry D				
Lead		7439-92-1	15100	383	192	ug/kg d	ry D				
Nickel		7440-02-0	<1920	1920	959	ug/kg d	ry U	U			
Selenium		7782-49-2	<3830	3830	1920	ug/kg d	ry U	U			
Silver		7440-22-4	<1920	1920	959	ug/kg d	ry U	U			
Thallium		7440-28-0	<3830	3830	1920	ug/kg d	ry U	U			
Uranium		7440-61-1	1320	383	192	ug/kg d	ry D				
Lab Sample Name:	C161022-22	Sampl	le No: A8M5	5-2567		Sample Da	ate: 10/8/2	016 12:00:00 I	PM		
Location	SF Animas Riv	er			Matrix Typ	e: Solid (dry wt basis))			
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes		
Antimony		7440-36-0	<120	120	60.0	ug/kg d	ry U	U			
Arsenic		7440-38-2	78.9	240	60.0	ug/kg d	ry JD	J	Е		
Cadmium		7440-43-9	118	24.0	12.0	ug/kg d	ry D				
Chromium		7440-47-3	306	240	120	ug/kg d	ry D				
Copper		7440-50-8	1890	120	60.0	ug/kg d	ry D				
Lead		7439-92-1	327	24.0	12.0	ug/kg d	ry D				
Nickel		7440-02-0	173	120	60.0	ug/kg d	ry D				
Selenium		7782-49-2	480	240	120	ug/kg d	D				

Wednesday, January 04, 2017 Page 8 of 19

Silver		7440-22-4	<120	120	60.0	ug/kg dr	y U	U	
Гhallium		7440-28-0	<240	240	120	ug/kg dr	y U	U	
Uranium		7440-61-1	<24.0	24.0	12.0	ug/kg dr	y U	U	
Lab Sample Name:	C161022-23	Sample	e No: A8M5	5-2575		Sample Dat	te: 10/13/	/2016 3:00:00 F	PM
Location	SF Mineral-E	Below CG			Matrix Ty	pe: Solid (d	ry wt basis))	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result 1 Units		Validation Qualifier	Validation Notes
Antimony		7440-36-0	<224	224	112	ug/kg dr	y U	U	
Arsenic		7440-38-2	342	448	112	ug/kg dr	y JD	J	E
Cadmium		7440-43-9	316	44.8	22.4	ug/kg dr	y D		
Chromium		7440-47-3	514	448	224	ug/kg dr	y D		
Copper		7440-50-8	3910	224	112	ug/kg dr	y D		
Lead		7439-92-1	1620	44.8	22.4	ug/kg dr	y D		
Nickel		7440-02-0	878	224	112	ug/kg dr	y D		
Selenium		7782-49-2	539	448	224	ug/kg dr	y D		
Silver		7440-22-4	<224	224	112	ug/kg dr	y U	U	
Гhallium		7440-28-0	<448	448	224	ug/kg dr	y U	U	
Uranium		7440-61-1	85.4	44.8	22.4	ug/kg dr	y D		
Lab Sample Name:	C161022-01	DE Tot. Rec. Sample	e No: A8M5	5-2565		Sample Dat	te: 10/7/2	2016 1:00:00 PM	М
Lab Sample Name: Location		Sample	e No: A8M5		Matrix Typ	pe: Solid (d	ry wt basis))	
Lab Sample Name: Location	C161022-01			Sample Adjusted CRQL		pe: Solid (d	ry wt basis) Lab		
Lab Sample Name: Location Analyte	C161022-01	Sample	e No: A8M5 Result	Sample Adjusted	Matrix Typ Sample Adjusted	pe: Solid (d	ry wt basis) Lab Qualifier	Validation	Validation
Lab Sample Name: Location Analyte Aluminum	C161022-01	Sample CAS No	e No: A8M5 Result Value	Sample Adjusted CRQL	Matrix Typ Sample Adjusted MDL	pe: Solid (d Result 1 Units	ry wt basis) Lab Qualifier D	Validation Qualifier	Validation Notes
Lab Sample Name: Location Analyte Aluminum Beryllium	C161022-01	Sample CAS No 7429-90-5	Result Value	Sample Adjusted CRQL	Matrix Typ Sample Adjusted MDL 2.51	Result Units of mg/kg di	ry wt basis) Lab Qualifier D	Validation Qualifier J+	Validation Notes
Lab Sample Name: Location Analyte Aluminum Beryllium Calcium	C161022-01	Sample CAS No 7429-90-5 7440-41-7	Result Value 268 <0.628	Sample Adjusted CRQL 6.28 0.628	Matrix Typ Sample Adjusted MDL 2.51 0.126	Result Units mg/kg di	ry wt basis; Lab Qualifier D U	Validation Qualifier J+ U	Validation Notes E, Q
Lab Sample Name: Location Analyte Aluminum Beryllium Calcium	C161022-01	CAS No 7429-90-5 7440-41-7 7440-70-2	Result Value 268 <0.628 348	Sample Adjusted CRQL 6.28 0.628 31.4	Matrix Typ Sample Adjusted MDL 2.51 0.126	Result Units mg/kg dr	ry wt basis; Lab Qualifier D U D	Validation Qualifier J+ U	Validation Notes E, Q
Lab Sample Name: Location Analyte Aluminum Beryllium Calcium Iron Magnesium	C161022-01	CAS No 7429-90-5 7440-41-7 7440-70-2 7439-89-6	Result Value 268 <0.628 348 539	Sample Adjusted CRQL 6.28 0.628 31.4 31.4	Matrix Typ Sample Adjusted MDL 2.51 0.126 12.6	Result Units mg/kg di mg/kg di mg/kg di mg/kg di	Lab Qualifier D U D D D	Validation Qualifier J+ U J J+	Validation Notes E, Q E
Lab Sample Name: Location Analyte Aluminum Beryllium Calcium Iron Magnesium Manganese	C161022-01	CAS No 7429-90-5 7440-41-7 7440-70-2 7439-89-6 7439-95-4	Result Value 268 <0.628 348 539 271	Sample Adjusted CRQL 6.28 0.628 31.4 31.4	Matrix Typ Sample Adjusted MDL 2.51 0.126 12.6 12.6	mg/kg dr mg/kg dr mg/kg dr mg/kg dr mg/kg dr	ry wt basis; Lab Qualifier D D D D	Validation Qualifier J+ U J J+	Validation Notes E, Q E
Lab Sample Name: Location Analyte Aluminum Beryllium Calcium Iron Magnesium Manganese Silica (SiO2)	C161022-01	CAS No 7429-90-5 7440-41-7 7440-70-2 7439-89-6 7439-95-4 7439-96-5	Result Value 268 <0.628 348 539 271 75.7	Sample Adjusted CRQL 6.28 0.628 31.4 31.4 0.628	Matrix Typ Sample Adjusted MDL 2.51 0.126 12.6 12.6 0.251	Result Units mg/kg dr	Lab Qualifier D D D D D D D D	Validation Qualifier J+ U J J+ J J+ J	Validation Notes E, Q E Q E
Lab Sample Name: Location Analyte Aluminum Beryllium Calcium Iron Magnesium Manganese Silica (SiO2) Strontium	C161022-01	CAS No 7429-90-5 7440-41-7 7440-70-2 7439-89-6 7439-95-4 7439-96-5 763-18-69	Result Value 268 <0.628 348 539 271 75.7 569 1.18	Sample Adjusted CRQL 6.28 0.628 31.4 31.4 0.628 126 1.26 2.51	Matrix Typ Sample Adjusted MDL 2.51 0.126 12.6 12.6 0.251 31.4 0.251	mg/kg di mg/kg di mg/kg di mg/kg di mg/kg di mg/kg di mg/kg di mg/kg di mg/kg di	ry wt basis; Lab Qualifier D D D D D D D D D	Validation Qualifier J+ U J J+ J J+ J J- J- J	Validation Notes E, Q E Q L, E, Q E
Lab Sample Name: Location Analyte Aluminum Beryllium Calcium fron Magnesium Manganese Silica (SiO2) Strontium Zinc	C161022-01	CAS No 7429-90-5 7440-41-7 7440-70-2 7439-89-6 7439-95-4 7439-96-5 763-18-69 7440-24-6	Result Value 268 <0.628 348 539 271 75.7 569 1.18 185	Sample Adjusted CRQL 6.28 0.628 31.4 31.4 0.628 126 1.26 2.51	Matrix Typ Sample Adjusted MDL 2.51 0.126 12.6 12.6 0.251 31.4 0.251	mg/kg di mg/kg di mg/kg di mg/kg di mg/kg di mg/kg di mg/kg di mg/kg di mg/kg di	ry wt basis; Lab Qualifier D D D D D D D D D	Validation Qualifier J+ U J+ J+ J+ J J+ J- J- J- J- J-	Validation Notes E, Q E Q L, E, Q E
Lab Sample Name: Location Analyte Aluminum Beryllium Calcium fron Magnesium Manganese Silica (SiO2) Strontium Zinc Lab Sample Name:	C161022-01 A05	Sample CAS No 7429-90-5 7440-41-7 7440-70-2 7439-89-6 7439-95-4 7439-96-5 763-18-69 7440-24-6 7440-66-6	Result Value 268 <0.628 348 539 271 75.7 569 1.18 185	Sample Adjusted CRQL 6.28 0.628 31.4 31.4 0.628 126 1.26 2.51	Matrix Typ Sample Adjusted MDL 2.51 0.126 12.6 12.6 0.251 31.4 0.251	mg/kg dr	Lab Qualifier D D D D D D D D D D D D D D D D D D	Validation Qualifier J+ U J J+ J- J- J- 0016 11:00:00 A	Validation Notes E, Q E Q L, E, Q E
Lab Sample Name: Location Analyte Aluminum Beryllium Calcium fron Magnesium Manganese Silica (SiO2) Strontium Zinc Lab Sample Name: Location	C161022-01 A05	Sample CAS No 7429-90-5 7440-41-7 7440-70-2 7439-89-6 7439-95-4 7439-96-5 763-18-69 7440-24-6 7440-66-6	Result Value 268 <0.628 348 539 271 75.7 569 1.18 185	Sample Adjusted CRQL 6.28 0.628 31.4 31.4 0.628 126 1.26 2.51	Matrix Typ Sample Adjusted MDL 2.51 0.126 12.6 12.6 0.251 31.4 0.251	mg/kg dr	ry wt basis; Lab Qualifier D D D D D D D D D D T D T D T D T D T	Validation Qualifier J+ U J J+ J- J- J- 0016 11:00:00 A	Validation Notes E, Q E Q L, E, Q E AM
Lab Sample Name: Location Analyte Aluminum Beryllium Calcium Iron Magnesium Manganese Silica (SiO2) Strontium Zinc Lab Sample Name: Location Analyte	C161022-01 A05	CAS No 7429-90-5 7440-41-7 7440-70-2 7439-89-6 7439-96-5 763-18-69 7440-24-6 7440-66-6 Sample	Result Value 268 <0.628 348 539 271 75.7 569 1.18 185 e No: A8M5	Sample Adjusted CRQL 6.28 0.628 31.4 31.4 0.628 126 1.26 2.51 5-2566 Sample Adjusted	Matrix Typ Sample Adjusted MDL 2.51 0.126 12.6 12.6 0.251 31.4 0.251 1.26 Matrix Typ Sample Adjusted	mg/kg dr	ry wt basis; Lab Qualifier D D D D D D D D D D L D D L D D D D D	Validation Qualifier J+ U J J+ J- J- 016 11:00:00 A	Validation Notes E, Q E Q L, E, Q E AM
Lab Sample Name: Location Analyte Aluminum Beryllium Calcium Iron Magnesium Manganese Silica (SiO2) Strontium Zinc Lab Sample Name: Location Analyte	C161022-01 A05	CAS No 7429-90-5 7440-41-7 7440-70-2 7439-89-6 7439-95-4 7439-96-5 763-18-69 7440-24-6 7440-66-6 Sample CAS No	Result Value 268 <0.628 348 539 271 75.7 569 1.18 185 e No: A8M5 Result Value	Sample Adjusted CRQL 6.28 0.628 31.4 31.4 0.628 126 1.26 2.51 5-2566 Sample Adjusted CRQL	Matrix Typ Sample Adjusted MDL 2.51 0.126 12.6 12.6 0.251 31.4 0.251 1.26 Matrix Typ Sample Adjusted MDL	mg/kg dr	ry wt basis; Lab Qualifier D D D D D D D Lab P Lab Qualifier C C D D D D D D C D D C D C D C D C D C D C D C D C D C D C D C D C D C D C D C D C C	Validation Qualifier J+ U J J+ J- J- 016 11:00:00 A	Validation Notes E, Q E Q L, E, Q E AM Validation Notes
Lab Sample Name: Location Analyte Aluminum Beryllium Calcium Iron Magnesium Manganese Silica (SiO2) Strontium Zinc Lab Sample Name: Location Analyte Aluminum Beryllium	C161022-01 A05	CAS No 7429-90-5 7440-41-7 7440-70-2 7439-89-6 7439-96-5 763-18-69 7440-24-6 7440-66-6 Sample CAS No	Result Value 268 <0.628 348 539 271 75.7 569 1.18 185 e No: A8M5 Result Value 721	Sample Adjusted CRQL 6.28 0.628 31.4 31.4 0.628 126 1.26 2.51 5-2566 Sample Adjusted CRQL 29.8	Matrix Typ Sample Adjusted MDL 2.51 0.126 12.6 12.6 0.251 31.4 0.251 1.26 Matrix Typ Sample Adjusted MDL 11.9	mg/kg dr	ry wt basis; Lab Qualifier D D D D D D D D Lab Qualifier U U D U U D U U U U U U U	Validation Qualifier J+ U J J+ J- 2016 11:00:00 A Validation Qualifier J+	Validation Notes E, Q E Q L, E, Q E AM Validation Notes
_	C161022-01 A05	Sample CAS No 7429-90-5 7440-41-7 7440-70-2 7439-89-6 7439-95-4 7439-96-5 763-18-69 7440-24-6 7440-66-6 Sample CAS No 7429-90-5 7440-41-7	Result Value 268 <0.628 348 539 271 75.7 569 1.18 185 e No: A8M5 Result Value 721 <2.98	Sample Adjusted CRQL 6.28 0.628 31.4 31.4 0.628 126 1.26 2.51 5-2566 Sample Adjusted CRQL 29.8 2.98	Matrix Typ Sample Adjusted MDL 2.51 0.126 12.6 12.6 0.251 31.4 0.251 1.26 Matrix Typ Sample Adjusted MDL 11.9 0.597	mg/kg dr	ry wt basis; Lab Qualifier D D D D D D D Lab P D Lab Qualifier U U U U	Validation Qualifier J+ U J J+ J- J- 016 11:00:00 A Validation Qualifier J+ U	Validation Notes E, Q E Q L, E, Q E AM Validation Notes E, Q

Wednesday, January 04, 2017 Page 9 of 19

Analysis	Method	ICPOE Tot.	Rec.	Metals

Manganese		7439-96-5	308	2.98	1.19	mg/kg d	r D		
Silica (SiO2)		763-18-69	657	597	149	mg/kg d	r D	J+	Q
Strontium		7440-24-6	< 5.97	5.97	1.19	mg/kg d	r U	R	L
Zinc		7440-66-6	38.5	11.9	5.97	mg/kg d		J	Е
Lab Sample Name:	C161022-03	Sampl	e No: A8M5	5-2564		Sample Da	te: 10/6/2	2016 10:00:00 A	AM
Location	A34				Matrix Ty _l	pe: Solid (d	dry wt basis)	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Aluminum		7429-90-5	840	12.4	4.96	mg/kg d	r D	J+	E, Q
Beryllium		7440-41-7	<1.24	1.24	0.248	mg/kg d	r U	U	
Calcium		7440-70-2	687	62.0	24.8	mg/kg d	r D	J	Е
ron		7439-89-6	2220	62.0	24.8	mg/kg d	r D	J+	Q
Magnesium		7439-95-4	519	62.0	24.8	mg/kg d	r D	J	Е
Manganese		7439-96-5	147	1.24	0.496	mg/kg d	r D		
Silica (SiO2)		763-18-69	807	248	62.0	mg/kg d	r D	J+	Q
Strontium		7440-24-6	8.64	2.48	0.496	mg/kg d	r D	J-	L, E, Q
Zinc		7440-66-6	345	4.96	2.48	mg/kg d	r D	J	Е
Lab Sample Name:	C161022-04	Sampl	e No: A8M5	5-2563		Sample Da	te: 10/6/2	016 1:00:00 PI	M
Location	A37				Matrix Typ	pe: Solid (d	dry wt basis))	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Aluminum		7429-90-5	319	6.10	2.44	mg/kg d	r D	J+	E, Q
Beryllium		7440-41-7	< 0.610	0.610	0.122	mg/kg d	r U	U	
Calcium		7440-70-2	190	30.5	12.2	mg/kg d	r D	J	Е
ron		7439-89-6	620	30.5	12.2	mg/kg d	r D	J+	Q
Magnesium		7439-95-4	188	30.5	12.2	mg/kg d	r D	J	Е
Manganese		7439-96-5	224	0.610	0.244	mg/kg d	r D		
Silica (SiO2)		763-18-69	254	122	30.5	mg/kg d	r D	J+	Q
Strontium		7440-24-6	2.92	1.22	0.244	mg/kg d	r D	J-	L, E, Q
Zinc		7440-66-6	199	2.44	1.22	mg/kg d	r D	J	Е
Lab Sample Name:	C161022-05	Sampl	e No: A8M5	5-2561		Sample Da	te: 10/4/2	2016 3:00:00 PI	M
Location	A43				Matrix Ty _l	pe: Solid (d	dry wt basis))	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Aluminum		7429-90-5	51.5	6.08	2.43	mg/kg d	r D	J+	E, Q
Beryllium		7440-41-7	< 0.608	0.608	0.122	mg/kg d	r U	U	
Calcium		7440-70-2	205	30.4	12.2	mg/kg d	r D	J	E
ron		7439-89-6	96.6	30.4	12.2	mg/kg d	r D	J+	Q
Magnesium		7439-95-4	193	30.4	12.2	mg/kg d	r D	J	Е
Manganese		7439-96-5	29.8	0.608	0.243	mg/kg d	r D		
Silica (SiO2)		763-18-69	136	122	30.4	mg/kg d	r D	J+	Q
Strontium		7440-24-6	2.48	1.22	0.243	mg/kg d	r D	J-	L, E, Q
Wednesday, January 04	4, 2017								Page 10 of

Zinc		7440-66-6	71.3	2.43	1.22	mg/kg d	lr D	J	Е
Lab Sample Name:	C161022-06	Sampl						2016 10:00:00 A	
Location	A45	•			Matrix Ty	_			
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample	Result	Lab		Validation Notes
Aluminum		7429-90-5	334	6.23	2.49	mg/kg d	lr D	J+	E, Q
Beryllium		7440-41-7	0.206	0.623	0.125	mg/kg d	lr JD	J	
Calcium		7440-70-2	181	31.1	12.5	mg/kg d	lr D	J	Е
Iron		7439-89-6	304	31.1	12.5	mg/kg d	lr D	J+	Q
Magnesium		7439-95-4	206	31.1	12.5	mg/kg d	lr D	J	E
Manganese		7439-96-5	167	0.623	0.249	mg/kg d	lr D		
Silica (SiO2)		763-18-69	248	125	31.1	mg/kg d	lr D	J+	Q
Strontium		7440-24-6	1.96	1.25	0.249	mg/kg d	lr D	J-	L, E, Q
Zinc		7440-66-6	213	2.49	1.25	mg/kg d	lr D	J	Е
Lab Sample Name:	C161022-07	Sampl	e No: A8M5	-2560		Sample Da	ite: 10/4/2	2016 1:00:00 PI	M
Location	A48				Matrix Typ	e: Solid (dry wt basis))	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Aluminum		7429-90-5	197	6.15	2.46	mg/kg d	lr D	J+	E, Q
Beryllium		7440-41-7	< 0.615	0.615	0.123	mg/kg d	lr U	U	
Calcium		7440-70-2	276	30.8	12.3	mg/kg d	lr D	J	Е
Iron		7439-89-6	545	30.8	12.3	mg/kg d	lr D	J+	Q
Magnesium		7439-95-4	266	30.8	12.3	mg/kg d	lr D	J	Е
Manganese		7439-96-5	39.2	0.615	0.246	mg/kg d	lr D		
Silica (SiO2)		763-18-69	309	123	30.8	mg/kg d	lr D	J+	Q
Strontium		7440-24-6	2.62	1.23	0.246	mg/kg d	lr D	J-	L, E, Q
Zinc		7440-66-6	134	2.46	1.23	mg/kg d		J	Е
Lab Sample Name:	C161022-08	Sampl	e No: A8M5	-2558		Sample Da	ite: 10/3/2	2016 12:00:00 I	PM
Location	A56				Matrix Ty _I	e: Solid (dry wt basis))	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Aluminum		7429-90-5	171	5.90	2.36	mg/kg d	lr D	J+	E, Q
Beryllium		7440-41-7	0.139	0.590	0.118	mg/kg d	lr JD	J	
Calcium		7440-70-2	142	29.5	11.8	mg/kg d	lr D	J	Е
Iron		7439-89-6	160	29.5	11.8	mg/kg d	lr D	J+	Q
Magnesium		7439-95-4	157	29.5	11.8	mg/kg d	lr D	J	Е
Manganese		7439-96-5	63.8	0.590	0.236	mg/kg d	lr D		
Silica (SiO2)		763-18-69	159	118	29.5	mg/kg d	lr D	J+	Q
Strontium		7440-24-6	1.77	1.18	0.236	mg/kg d	lr D	J-	L, E, Q
Zinc		7440-66-6							

Wednesday, January 04, 2017 Page 11 of 19

Zinc

Sample Date: 10/11/2016 2:00:00 PM Lab Sample Name: C161022-09 **Sample No:** A8M5-2569 Location An Rv-abv Eureka Matrix Type: Solid (dry wt basis) Analyte CAS No Result Sample Sample Validation Validation Result Lab Value Adjusted Adjusted Qualifier Qualifier Units **Notes** MDL **CRQL** Aluminum 7429-90-5 569 13.2 5.29 J+ E, Q mg/kg dr D Bervllium 7440-41-7 0.677 1.32 0.265 JD mg/kg dr J Calcium 7440-70-2 145 66.1 26.5 D J E mg/kg dr 7439-89-6 84.8 mg/kg dr Iron 66.1 26.5 D J+ Q Е Magnesium 7439-95-4 103 66.1 26.5 J mg/kg dr D Manganese 7439-96-5 30.5 1.32 0.529 mg/kg dr D Silica (SiO2) 763-18-69 202 265 mg/kg dr J+ 66.1 JD Q Strontium 7440-24-6 1.29 2.65 0.529 mg/kg dr JD J-L, E, Q Zinc 7440-66-6 82.5 5.29 2.65 mg/kg dr Ī E C161022-10 A8M5-2570 Sample Date: 10/11/2016 10:30:00 AM Lab Sample Name: Sample No: Location An RV-Abv Minnie Matrix Type: Solid (dry wt basis) CAS No Result Analyte Sample Sample Validation Validation Result Lab Value Adjusted Adjusted Units **Qualifier** Qualifier **Notes CRQL MDL** 952 2.71 Aluminum 7429-90-5 6.77 mg/kg dr D J+ E, Q Beryllium 7440-41-7 0.786 0.677 0.135 D mg/kg dr Calcium 7440-70-2 177 33.9 13.5 mg/kg dr D J E Iron 7439-89-6 324 33.9 13.5 mg/kg dr D J+ Q 7439-95-4 185 33.9 13.5 J Е Magnesium mg/kg dr D 7439-96-5 133 0.677 0.271 Manganese mg/kg dr D Silica (SiO2) 763-18-69 528 135 33.9 mg/kg dr D J+ Q 1.89 0.271 Strontium 7440-24-6 1.35 mg/kg dr D J-L, E, Q Zinc 7440-66-6 212 2.71 1.35 mg/kg dr J Ē C161022-11 A8M5-2557 Sample Date: 9/30/2016 10:00:00 AM Lab Sample Name: Sample No: Location Hermosa Cr Matrix Type: Solid (dry wt basis) CAS No Result Analyte Sample Sample Result Lab Validation Validation Adjusted Value Adjusted Units Qualifier Qualifier **Notes** CRQL MDL Aluminum 7429-90-5 62.8 6.14 2.46 mg/kg dr D J+ E, Q U Beryllium 7440-41-7 < 0.614 0.614 0.123 U mg/kg dr Calcium 7440-70-2 1880 30.7 12.3 J mg/kg dr D Ē 7439-89-6 85.0 30.7 mg/kg dr Iron 12.3 D Magnesium 7439-95-4 333 30.7 12.3 J mg/kg dr D Е Manganese 7439-96-5 8.40 0.614 0.246 mg/kg dr D Silica (SiO2) 763-18-69 191 123 30.7 mg/kg dr D J+ Q Strontium 7440-24-6 12.6 1.23 0.246 JD J-L, E, Q mg/kg dr

Wednesday, January 04, 2017 Page 12 of 19

2.46

1.23

mg/kg dr

J

E

47.8

7440-66-6

Lab Sample Name:	C161022-12	Sample	e No: A8M5	-2578	i	Sample Da	ite: 10/17/	/2016 1:00:00 I	² M
Location	M08				Matrix Typ	e: Solid (dry wt basis))	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Aluminum		7429-90-5	370	6.25	2.50	mg/kg d	r D	J	Е
Beryllium		7440-41-7	< 0.625	0.625	0.125	mg/kg d	r U	U	
Calcium		7440-70-2	222	31.3	12.5	mg/kg d	r D	J	Е
Iron		7439-89-6	157	31.3	12.5	mg/kg d	r D	J+	Q
Magnesium		7439-95-4	161	31.3	12.5	mg/kg d	r D	J	Е
Manganese		7439-96-5	75.7	0.625	0.250	mg/kg d	r D		
Silica (SiO2)		763-18-69	279	125	31.3	mg/kg d	r D		
Strontium		7440-24-6	4.12	1.25	0.250	mg/kg d	r D	J-	L, E
Zinc		7440-66-6	56.1	2.50	1.25	mg/kg d		J	Е
Lab Sample Name:	C161022-13	Sample	e No: A8M5	5-2577	;	Sample Da	ite: 10/17/	/2016 10:30:00	AM
Location	M10a				Matrix Typ	e: Solid (dry wt basis))	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Aluminum		7429-90-5	304	6.74	2.70	mg/kg d	r D	J+	E, Q
Beryllium		7440-41-7	< 0.674	0.674	0.135	mg/kg d	r U	U	
Calcium		7440-70-2	170	33.7	13.5	mg/kg d	r D	J	Е
Iron		7439-89-6	646	33.7	13.5	mg/kg d	r D	J+	Q
Magnesium		7439-95-4	134	33.7	13.5	mg/kg d	r D	J	Е
Manganese		7439-96-5	49.4	0.674	0.270	mg/kg d	r D		
Silica (SiO2)		763-18-69	285	135	33.7	mg/kg d	r D	J+	Q
Strontium		7440-24-6	3.70	1.35	0.270	mg/kg d	r D	J-	L, E, Q
Zinc		7440-66-6	110	2.70	1.35	mg/kg d	r D	J	Е
Lab Sample Name:	C161022-14	Sample	e No: A8M5	-2576	:	Sample Da	ite: 10/14/	/2016 2:00:00 I	PM
Location	M14B				Matrix Typ	e: Solid (dry wt basis))	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units	Lab		Validation Notes
Aluminum		7429-90-5	722	6.09	2.43	mg/kg d	r D	J+	E, Q
Beryllium		7440-41-7	< 0.609	0.609	0.122	mg/kg d	lr U	U	
Calcium		7440-70-2	127	30.4	12.2	mg/kg d	r D	J	Е
Iron		7439-89-6	641	30.4	12.2	mg/kg d	r D	J+	Q
Magnesium		7439-95-4	205	30.4	12.2	mg/kg d	r D	J	Е
Manganese		7439-96-5	28.0	0.609	0.243	mg/kg d	r D		
Silica (SiO2)		763-18-69	412	122	30.4	mg/kg d	r D	J+	Q
Strontium		7440-24-6	1.97	1.22	0.243	mg/kg d	r D	J-	L, E, Q
									_

Wednesday, January 04, 2017 Page 13 of 19

Lab Sample Name: C161022-15 **Sample No:** A8M5-2574 **Sample Date:** 10/13/2016 12:30:00 PM

Location M27 Matrix Type: Solid (dry wt basis)

Analyte	CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Lab Units Qualifier	Validation Qualifier	Validation Notes
Aluminum	7429-90-5	558	63.0	25.2	mg/kg dr D	J+	E, Q
Beryllium	7440-41-7	<6.30	6.30	1.26	mg/kg dr U	U	
Calcium	7440-70-2	135	315	126	mg/kg dr JD	J	Е
Iron	7439-89-6	6400	315	126	mg/kg dr D	J+	Q
Magnesium	7439-95-4	<315	315	126	mg/kg dr U	UJ	Е
Manganese	7439-96-5	22.8	6.30	2.52	mg/kg dr D		
Silica (SiO2)	763-18-69	<1260	1260	315	mg/kg dr U	U	
Strontium	7440-24-6	<12.6	12.6	2.52	mg/kg dr U	R	L
Zinc	7440-66-6	23.6	25.2	12.6	mg/kg dr JD	J	Е

Lab Sample Name: C161022-16 **Sample No:** A8M5-2573 **Sample Date:** 10/13/2016 10:00:00 AM

Location M28 Matrix Type: Solid (dry wt basis)

		Truck Type.									
Analyte	CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Lab Units Qualifier	Validation Qualifier	Validation Notes				
Aluminum	7429-90-5	471	5.83	2.33	mg/kg dr D	J+	E, Q				
Beryllium	7440-41-7	< 0.583	0.583	0.117	mg/kg dr U	U					
Calcium	7440-70-2	243	29.2	11.7	mg/kg dr D	J	Е				
Iron	7439-89-6	1510	29.2	11.7	mg/kg dr D	J+	Q				
Magnesium	7439-95-4	156	29.2	11.7	mg/kg dr D	J	Е				
Manganese	7439-96-5	10.1	0.583	0.233	mg/kg dr D						
Silica (SiO2)	763-18-69	508	117	29.2	mg/kg dr D	J+	Q				
Strontium	7440-24-6	1.80	1.17	0.233	mg/kg dr D	J-	L, E, Q				
Zinc	7440-66-6	41.7	2.33	1.17	mg/kg dr D	J	Е				

Lab Sample Name: C161022-17 **Sample No:** A8M5-2571 **Sample Date:** 10/12/2016 3:00:00 PM

Location M30 Matrix Type: Solid (dry wt basis)

		VI									
Analyte	CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Lab Units Qualifie	Validation r Qualifier	Validation Notes				
Aluminum	7429-90-5	96.9	6.18	2.47	mg/kg dr D	J+	E, Q				
Beryllium	7440-41-7	< 0.618	0.618	0.124	mg/kg dr U	U					
Calcium	7440-70-2	722	30.9	12.4	mg/kg dr D	J	Е				
Iron	7439-89-6	118	30.9	12.4	mg/kg dr D	J+	Q				
Magnesium	7439-95-4	180	30.9	12.4	mg/kg dr D	J	E				
Manganese	7439-96-5	42.2	0.618	0.247	mg/kg dr D						
Silica (SiO2)	763-18-69	190	124	30.9	mg/kg dr D	J+	Q				
Strontium	7440-24-6	2.70	1.24	0.247	mg/kg dr D	J-	L, E, Q				
Zinc	7440-66-6	62.4	2.47	1.24	mg/kg dr D	J	Е				

Wednesday, January 04, 2017 Page 14 of 19

Lab Sample Name:	C161022-18	Sample 1	No: A8M5	5-2572	Sample Date: 10/12/2016 10:30:00 AM					
Location	M34				Matrix Typ	e: Solid (dry wt basis	s)			
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Lab Units Qualifier		Validation Notes		
Aluminum		7429-90-5	580	6.25	2.50	mg/kg dr D	J+	E, Q		
Beryllium		7440-41-7	< 0.625	0.625	0.125	mg/kg dr U	U			
Calcium		7440-70-2	124	31.2	12.5	mg/kg dr D	J	E		
Iron		7439-89-6	1790	31.2	12.5	mg/kg dr D	J+	Q		
Magnesium		7439-95-4	120	31.2	12.5	mg/kg dr D	J	Е		
Manganese		7439-96-5	7.76	0.625	0.250	mg/kg dr D				
Silica (SiO2)		763-18-69	744	125	31.2	mg/kg dr D	J+	Q		
Strontium		7440-24-6	1.41	1.25	0.250	mg/kg dr D	J-	L, E, Q		
Zinc		7440-66-6	40.3	2.50	1.25	mg/kg dr D	J	Е		
Lab Sample Name:	C161022-19	Sample 1	No: A8M5	5-2579	;	Sample Date: 10/17	7/2016 3:30:00 I	PM		
Location	Mineral-Abv	Browns Gulch			Matrix Typ	e: Solid (dry wt basis	s)			
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Lab Units Qualifier	Validation Qualifier	Validation Notes		
Aluminum		7429-90-5	378	5.76	2.30	mg/kg dr D	J+	E, Q		
Beryllium		7440-41-7	< 0.576	0.576	0.115	mg/kg dr U	U			
Calcium		7440-70-2	190	28.8	11.5	mg/kg dr D	J	Е		
Iron		7439-89-6	415	28.8	11.5	mg/kg dr D	J+	Q		
Magnesium		7439-95-4	145	28.8	11.5	mg/kg dr D	J	Е		
Manganese		7439-96-5	25.4	0.576	0.230	mg/kg dr D				
Silica (SiO2)		763-18-69	298	115	28.8	mg/kg dr D	J+	Q		
Strontium		7440-24-6	2.77	1.15	0.230	mg/kg dr D	J-	L, E, Q		
Zinc		7440-66-6	98.6	2.30	1.15	mg/kg dr D	J	Е		
Lab Sample Name:	C161022-20	Sample 1	No: A8M5	5-2562	;	Sample Date: 10/5/	2016 11:00:00	AM		
Location	Picayne Gulc	h			Matrix Typ	e: Solid (dry wt basis	s)			
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Lab Units Qualifier	Validation Qualifier	Validation Notes		
Aluminum		7429-90-5	128	4.76	1.91	mg/kg dr D	J+	E, Q		
Beryllium		7440-41-7	< 0.476	0.476	0.0953	mg/kg dr U	U			
Calcium		7440-70-2	225	23.8	9.53	mg/kg dr D	J	Е		
Iron		7439-89-6	291	23.8	9.53	mg/kg dr D	J+	Q		
Magnesium		7439-95-4	201	23.8	9.53	mg/kg dr D	J	Е		
Manganese		7439-96-5	290	0.476	0.191	mg/kg dr D				
Silica (SiO2)		763-18-69	246	95.3	23.8	mg/kg dr D	J+	Q		
Strontium		7440-24-6	2.51	0.953	0.191	mg/kg dr D	J-	L, E, Q		
Zinc		7440-66-6	71.8	1.91	0.953	mg/kg dr D	J	Е		

Wednesday, January 04, 2017 Page 15 of 19

Zinc

C161022-21 **Sample Date:** 10/10/2016 1:00:00 PM Lab Sample Name: **Sample No:** A8M5-2568 Location Placer Gulch Matrix Type: Solid (dry wt basis) Analyte CAS No Result Sample Sample Validation Validation Result Lab Value Adjusted Adjusted Qualifier Qualifier Units **Notes** MDL **CRQL** Aluminum 7429-90-5 1200 95.9 38.3 mg/kg dr J+ E, Q D Bervllium 7440-41-7 <9.59 9.59 1.92 U U mg/kg dr Calcium 7440-70-2 <479 479 192 U UJ E mg/kg dr 7439-89-6 479 mg/kg dr Iron 241 192 JD J+ Q Е Magnesium 7439-95-4 <479 479 192 U UJ mg/kg dr Manganese 7439-96-5 35.1 9.59 3.83 mg/kg dr Silica (SiO2) 763-18-69 1920 479 mg/kg dr U <1920 U Strontium 7440-24-6 <19.2 19.2 3.83 mg/kg dr U R L Zinc 7440-66-6 51.8 38.3 19.2 mg/kg dr Е J C161022-22 A8M5-2567 Sample Date: 10/8/2016 12:00:00 PM Lab Sample Name: Sample No: Location SF Animas River Matrix Type: Solid (dry wt basis) CAS No Result Analyte Sample Sample Validation Validation Result Lab Value Adjusted Adjusted Units **Qualifier** Qualifier **Notes CRQL MDL** 17.1 2.40 Aluminum 7429-90-5 6.00 mg/kg dr D Beryllium 7440-41-7 < 0.600 0.600 0.120 U U mg/kg dr Calcium 7440-70-2 150 30.0 12.0 mg/kg dr D Iron 7439-89-6 57.7 30.0 12.0 mg/kg dr D Magnesium 7439-95-4 88.5 30.0 12.0 mg/kg dr D 7439-96-5 8.87 0.600 0.240 Manganese mg/kg dr D Silica (SiO2) 763-18-69 43.3 120 30.0 mg/kg dr JD J+ Q 7440-24-6 1.50 1.20 0.240 Strontium mg/kg dr D L Zinc 7440-66-6 46.8 2.40 1.20 mg/kg dr A8M5-2575 Sample Date: 10/13/2016 3:00:00 PM Lab Sample Name: C161022-23 Sample No: Location SF Mineral-Below CG Matrix Type: Solid (dry wt basis) CAS No Result Sample Analyte Sample Result Lab Validation Validation Adjusted Value Adjusted Units Qualifier Qualifier **Notes** MDL **CRQL** Aluminum 7429-90-5 569 11.2 4.48 mg/kg dr D J+ E, Q 0.224 U Beryllium 7440-41-7 <1.12 1.12 U mg/kg dr Calcium 7440-70-2 252 56.0 22.4 J mg/kg dr D Ē 7439-89-6 56.0 mg/kg dr Iron 216 22.4 D J+ Q Magnesium 7439-95-4 151 56.0 22.4 J Е mg/kg dr D Manganese 7439-96-5 71.9 1.12 0.448 mg/kg dr D Silica (SiO2) 763-18-69 377 224 56.0 mg/kg dr D J+ Q Strontium 7440-24-6 1.68 2.24 0.448 JD J-L, E, Q mg/kg dr

Wednesday, January 04, 2017 Page 16 of 19

4.48

2.24

mg/kg dr

J

E

90.9

7440-66-6

Analysis Method TM_Mercury 245.1

A05	CAS No	.		Matrix Ty	ne: Solid	(as revd/wet	wt	
	CAS No	- •.		Matrix Type: Solid (as rcvd/wet wt				
		Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
	7439-97-6	< 0.050	0.050	0.025		as UJ	UJ	Н
C161022-02	Sampl	e No: A8M5	5-2566		Sample D	ate: 10/7/2	2016 11:00:00 A	AM
A07				Matrix Ty	pe: Solid	(as rcvd/wet v	wt	
	CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units			Validation Notes
	7439-97-6	< 0.239	0.239	0.119	mg/kg	as UJ	UJ	Н
C161022-03	Sampl	e No: A8M5	5-2564		Sample D	ate: 10/6/2	016 10:00:00 A	AM
A34				Matrix Ty	pe: Solid	(as rcvd/wet	wt	
	CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units			Validation Notes
	7439-97-6	< 0.099	0.099	0.050	mg/kg	as UJ	UJ	Н
C161022-04	Sampl	e No: A8M5	5-2563		Sample D	ate: 10/6/2	2016 1:00:00 PI	M
A37				Matrix Ty	pe: Solid	(as rcvd/wet	wt	
	CAS No	Result Value	-		Result Units			Validation Notes
	7439-97-6	< 0.049	0.049	0.024	mg/kg	as UJ	UJ	Н
C161022-05	Sampl	e No: A8M5	5-2561		Sample D	ate: 10/4/2	016 3:00:00 PI	M
A43				Matrix Tv	pe: Solid	(as rcvd/wet	wt	
	CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result	Lab	Validation	Validation Notes
	7439-97-6	< 0.049	0.049	0.024	0 0		UJ	H
C161022-06	Sampl	e No: A8M5	5-2559		Sample D	ate: 10/4/2	016 10:00:00 A	AM
A45				Matrix Ty	pe: Solid	(as rcvd/wet	wt	
	CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
	7439-97-6	< 0.050	0.050	0.025			UJ	Н
C161022-07	Sampl	e No: A8M5	5-2560		Sample D	ate: 10/4/2	2016 1:00:00 PI	M
A48				Matrix Ty	pe: Solid	(as rcvd/wet	wt	
	CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units			Validation Notes
	7439-97-6	< 0.049	0.049	0.025	mg/kg	as UJ	UJ	Н
C161022-08	Sampl	e No: A8M5	5-2558		Sample D	ate: 10/3/2	2016 12:00:00 I	PM
A56				Matrix Ty	pe: Solid	(as rcvd/wet	wt	
	CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units			Validation Notes
	7439-97-6	< 0.047	0.047	0.024	mg/kg	as UJ	UJ	Н
	C161022-04 A37 C161022-05 A43 C161022-06 A45 C161022-07 A48	C161022-03 Sample A34 CAS No 7439-97-6 C161022-04 Sample A37 CAS No 7439-97-6 C161022-05 Sample A43 CAS No 7439-97-6 C161022-06 Sample A45 CAS No 7439-97-6 C161022-07 Sample A48 CAS No 7439-97-6 C161022-08 Sample A56 CAS No 7439-97-6 C161022-08 Sample A56 CAS No	Table Tabl				Value Value CRQ Value CRQ Value CRQ Value V	Value

Analysis Method TM_Mercury 245.1

Lab Sample Name:	C161022-09	Sampl	le No: A8M5	-2569		Sample D	ate: 10/11/	/2016 2:00:00 I	PM
Location	An Rv-abv E	ıreka			Matrix Ty	pe: Solid	(as rcvd/wet	wt	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units	Lab		Validation Notes
Mercury		7439-97-6	< 0.106	0.106	0.053	0 0	as UJ	UJ	Н
Lab Sample Name:	C161022-10	Sampl	le No: A8M5	5-2570		Sample D	ate: 10/11/	/2016 10:30:00	AM
Location	An RV-Abv N	Minnie			Matrix Ty	pe: Solid	(as rcvd/wet	wt	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Mercury		7439-97-6	< 0.054	0.054	0.027	mg/kg	as UJ	UJ	Н
Lab Sample Name:	C161022-11	Sampl	e No: A8M5	5-2557		Sample D	ate: 9/30/2	2016 10:00:00 A	AM
Location	Hermosa Cr				Matrix Ty	pe: Solid	(as rcvd/wet	wt	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Mercury		7439-97-6	0.027	0.049	0.025	mg/kg	as JD	J-	Н
Lab Sample Name:	C161022-12	Sampl	e No: A8M5	5-2578		Sample D	ate: 10/17/	/2016 1:00:00 I	PM
Location	M08				Matrix Ty	pe: Solid	(as rcvd/wet	wt	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Mercury		7439-97-6	< 0.050	0.050	0.025	mg/kg	as U	U	
Lab Sample Name:	C161022-13	Sampl	e No: A8M5	-2577		Sample D	ate: 10/17/	/2016 10:30:00	AM
Location	M10a				Matrix Tv	pe: Solid	(as rcvd/wet	wt	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units	Lab		Validation Notes
Mercury		7439-97-6	< 0.054	0.054	0.027	mg/kg	as U	U	
Lab Sample Name:	C161022-14	Sampl	le No: A8M5	5-2576		Sample D	ate: 10/14/	/2016 2:00:00 I	PM
Location	M14B				Matrix Ty	pe: Solid	(as rcvd/wet	wt	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury		7439-97-6	< 0.049	0.049	0.024	mg/kg	as U	UJ	Н
Lab Sample Name:	C161022-15	~ .				0 0		001 < 10 00 00	DM
•	C101022-13	Sampl	le No: A8M5	5-2574			ate: 10/13/	2016 12:30:00	PM
Location	M27	Sampl	e No: A8M5	5-2574		Sample D	(as rcvd/wet		PM
Location		Sampl CAS No	e No: A8M5 Result Value	Sample Adjusted CRQL		Sample D	(as rcvd/wet v	wt	Validation Notes
Location Analyte		_	Result	Sample Adjusted	Matrix Ty Sample Adjusted	Sample D pe: Solid Result	(as rcvd/wet v Lab Qualifier	wt Validation	Validation
Location Analyte Mercury		CAS No	Result Value	Sample Adjusted CRQL 0.504	Matrix Ty Sample Adjusted MDL 0.252	Sample D pe: Solid Result Units mg/kg	(as rcvd/wet v Lab Qualifier as UJ	wt Validation Qualifier	Validation Notes
Location Analyte Mercury Lab Sample Name:	M27	CAS No	Result Value	Sample Adjusted CRQL 0.504	Matrix Ty Sample Adjusted MDL 0.252	Sample D pe: Solid Result Units mg/kg Sample D	(as revd/wet v Lab Qualifier as UJ pate: 10/13/	Validation Qualifier UJ /2016 10:00:00	Validation Notes
Location Analyte Mercury	M27	CAS No	Result Value	Sample Adjusted CRQL 0.504	Matrix Ty Sample Adjusted MDL 0.252	Sample D pe: Solid Result Units mg/kg Sample D	Lab Qualifier as UJ pate: 10/13/ (as rcvd/wet v	Validation Qualifier UJ /2016 10:00:00 wt Validation	Validation Notes

Analysis Method TM_Mercury 245.1

Lab Sample Name:	C161022-17	Sample	e No: A8M5	5-2571	Sample Date: 10/12/2016 3:00:00 PM				
Location	M30				Matrix Ty	pe: Solid	(as rcvd/wet	wt	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Mercury		7439-97-6	< 0.049	0.049	0.025		as UJ	UJ	H
Lab Sample Name:	C161022-18	Sample	e No: A8M5	5-2572		Sample D	ate: 10/12/	/2016 10:30:00	AM
Location	M34				Matrix Ty	pe: Solid	(as rcvd/wet	wt	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Mercury		7439-97-6	< 0.050	0.050	0.025	mg/kg	as UJ	UJ	Н
Lab Sample Name:	C161022-19	Sample	e No: A8M5	5-2579		Sample D	ate: 10/17/	/2016 3:30:00 I	PM
Location	Mineral-Abv I	Browns Gulch			Matrix Ty	pe: Solid	(as rcvd/wet	wt	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Mercury		7439-97-6	< 0.046	0.046	0.023	mg/kg	as U	U	
Lab Sample Name:	C161022-20	Sample	e No: A8M5	5-2562		Sample D	ate: 10/5/2	2016 11:00:00	AM
Location	Picayne Gulch	1			Matrix Ty	pe: Solid	(as rcvd/wet	wt	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Mercury		7439-97-6	< 0.038	0.038	0.019	~ ~	as UJ	UJ	Н
Lab Sample Name:	C161022-21	Sample	e No: A8M5	5-2568		Sample D	ate: 10/10/	/2016 1:00:00 I	PM
Location	Placer Gulch				Matrix Ty	pe: Solid	(as rcvd/wet	wt	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Mercury		7439-97-6	< 0.767	0.767	0.383	mg/kg	as UJ	UJ	Н
Lab Sample Name:	C161022-22	Sample	e No: A8M5	5-2567		Sample D	ate: 10/8/2	2016 12:00:00 I	PM
Location	SF Animas Ri	ver			Matrix Ty	pe: Solid	(as rcvd/wet	wt	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Mercury		7439-97-6	< 0.048	0.048	0.024		as UJ	UJ	Н
Lab Sample Name:	C161022-23	Sample	e No: A8M5	5-2575		Sample D	ate: 10/13/	/2016 3:00:00 I	PM
Location	SF Mineral-Be	elow CG			Matrix Ty	pe: Solid	(as rcvd/wet	wt	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Mercury		7439-97-6	< 0.090	0.090	0.045	mg/kg	as UJ	UJ	Н
•						2 8			

Wednesday, January 04, 2017 Page 19 of 19



DATA VALIDATION REPORT

Bonita Peak DV ESAT A-129

SAMPLE DELIVERY GROUP: C161023

Prepared by

MEC^X 12269 East Vassar Drive Aurora, CO 80014

Project: Bonita Peak DV ESAT A-129

SDG: C161023

I. INTRODUCTION

Task Order Title: Bonita Peak DV ESAT A-129

Contract Task Order: 20408.012.004.0434.00

Sample Delivery Group: C161023
Weston Project Manager: Natalie Quiet
EPA Project Manager: Don Goodrich

TDD No.: 0004/1612-04
Case No.: ESAT TDF A-129
Matrix: Solid/Water

QC Level: Stage 4

No. of Samples: 9
No. of Reanalyses/Dilutions: 0

Laboratory: ESAT

Table 1. Sample Identification

Location ID	Sample No.	Lab Sample Name	Matrix Type	Collection Date	Method
A12	A8M5-2580	C161023-01	Water	9/28/2016 9:57:00 AM	200.7, 200.8
A12	A8M5-2580	C161023-02	Water	9/28/2016 9:57:00 AM	200.7, 200.8, 2340B,
A12	A8M5-2583	C161023-03	Solid	9/28/2016 9:57:00 AM	200.7, 200.8, 7473
CC02D	A8M5-2581	C161023-04	Water	9/27/2016 11:00:00 AM	200.7, 200.8
CC02D	A8M5-2581	C161023-05	Water	9/27/2016 11:00:00 AM	200.7, 200.8, 2340B
CC02D	A8M5-2584	C161023-06	Solid	9/27/2016 11:00:00 AM	200.7, 200.8, 7473
M12C	A8M5-2582	C161023-07	Water	9/29/2016 8:51:00 AM	200.7, 200.8
M12C	A8M5-2582	C161023-08	Water	9/29/2016 8:51:00 AM	200.7, 200.8, 2340B
M12C	A8M5-2585	C161023-09	Solid	9/29/2016 8:51:00 AM	200.7, 200.8, 7473

It should be noted that the reviewer used laboratory sample names to identify specific sample fractions in this report.

II. Sample Management

The samples were received within the temperature limits of >0°C to <6°C. According to the Sample Receipt Form (SRF) the samples were received intact and properly preserved. The chains of custody (COC) were signed and dated by field and/or laboratory personnel. The samples were logged in the by laboratory with unique laboratory ID for the total and dissolved metals, and wet chemistry analyses. Custody seals were absent; the SRF indicated that the samples were "dropped off."

1

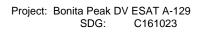


Data Qualifier Reference Table

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins or PCB congeners.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
J+	Not applicable	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample, and may have a potential positive bias.
J-	Not applicable	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample, and may have a potential negative bias.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.



Qualifier	Organics	Inorganics
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.





Qualification Code Reference Table

Qualifier	Organics	Inorganics
Н	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used for the calibration was incorrect
С	Calibration %RSD or %D was noncompliant.	Correlation coefficient is <0.995 or calibration was noncompliant.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
В	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
L1	LCS/LCSD RPD was outside control limits.	LCS/LCSD RPD was outside control limits.
Q	MS/MSD recovery was poor.	MS recovery was poor.
Q1	MS/MSD RPD was outside control limits.	MS/MSD RPD was outside control limits.
Е	Not applicable.	Duplicates showed poor agreement.
1	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
Α	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	ICPMS tune was not compliant.
Т	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present.	Not applicable.
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
F1	Field duplicate results were outside the control limit.	Field duplicate results were outside the control limit.
\$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.



Qualifier	Organics	Inorganics
D	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
Р	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
* , *	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.



III. Method Analyses

A. Methods 200.7, 200.8, 7473 and 2340B —Metals, Mercury and Hardness

Reviewed By: M. Hilchey

Date Reviewed: December 29, 2016

The samples listed in Table 1 for these analyses were validated based on the guidelines outlined in the Quality Assurance Project Plan for U. S. EPA Region 8 CERCLA Site Assessment (Rev. 2015); United States Environmental Protection Agency Methods 200.7, 200.8 and 7473; Standard Methods 2340B; and the National Functional Guidelines for Inorganic Superfund Data Review (2014).

- Holding Times: The analytical holding times, 28 days for mercury and six months for the remaining metals, were met with the following exception. All samples were analyzed past the required holding time but within 2x the requirement for mercury. Results for mercury were qualified as estimated with low potential bias (UJ for nondetects, J- for detects).
- Instrument tune: All ICPMS tuning requirements were met.
- Calibration:
 - o Initial calibration: Initial instrument calibrations met method acceptance requirements.
 - Initial (ICV) and continuing calibration (CCV) verification: The ICV and CCV frequency requirements were met. ICV and CCV recoveries were within 90-110%. The reporting limit check standards met laboratory recovery limits.
- Method Blanks: No target analytes were reported in the method blanks or calibration blanks.
- Interference Check Samples (ICSA/B): Recoveries were within the control limits of 80-120% or ±2× the reporting limit, whichever is greater. For all site samples, the concentrations of more than half of the interferents were less than half of the concentrations of interferents in the ICSA; therefore, the samples were not assessed for matrix interference.
- Laboratory Control Samples (LCS): The LCS recoveries were within the laboratory control limits for all target analytes with the exception of iron (77%) in preparation batch 1611124. Iron results for samples C161023-03, C161023-06 and C161023-09 were qualified as estimated with low potential bias (J-).
- Laboratory Duplicates Laboratory duplicate analyses were performed on samples C161023-01, C161023-02 and C161023-03 for Methods 200.7 and 200.8, and on sample C161023-06 for Method 7473. All RPDs met the laboratory control limit of ≤20% for sample results <5x RL.
- Matrix Spike: Matrix spike analyses were performed on samples C161023-01, C161023-02 and C161023-03 for Methods 200.7 and 200.8. MS/MSD analyses were performed on sample C161023-06 for Method 7473. Recoveries were not assessed when the parent sample concentrations were

more than 4× the spike amount. Recoveries for all target analytes met laboratory control limits of 70-130% except as noted in the table below. Associated sample results were qualified as estimated with low potential bias (UJ and J-). MS/MSD RPDs met the control limit of ≤20%.

Target analyte	Matrix Spike recovery	Qualified samples
selenium	46%	
antimony	50%	All solid samples
lead	65%	All solid samples
arsenic	59%	

- Post Digestion Spike: Post digestion spike analyses were not reported.
- Serial Dilution: Serial dilution analysis was performed on samples C161023-01, C161023-02 and C161023-03 for Methods 200.7 and 200.8. Results were not assessed unless the parent sample concentration was >50× the MDL. The control limit of ≤10% difference (%D) of the original sample results was met for all target analytes with the exception of manganese (16%) in sample C161023-03. Manganese results for all solid samples were qualified as estimated (J).
- Internal Standards: All site sample ICPMS internal standard (IS) intensities were within 60-125% of the response in the calibration blank for reported target analytes.
- Sample Result Verification: Sample results were verified for all samples reviewed at validation Stage
 Detects below the reporting limit were qualified as estimated (J). Nondetects are valid to the RL.

All water samples were diluted 5x for total ICPMS analysis. All sediment samples were analyzed at various dilutions for Methods 200.7 and 200.8. Detected results for dilutions were flagged with "D" by the laboratory. Reporting limits were adjusted accordingly.

It should be noted that mercury results were flagged with "D"; however, review of the raw data indicates that no samples were diluted for 7473 analysis.

- Field QC Samples: MEC^X evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^X used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below.
 - Field Blanks and Equipment Blanks: No field blanks or equipment blank samples were identified for this SDG. Field blanks are associated by collection date and time, and by sampler.
 - Field Duplicates: There were no field duplicate samples identified for this SDG. Field duplicates are associated by collection date and time, and by sampler.

Validated Sample Result Forms C161023

Analysis Metho	od DM-1	Hardness -	Calculat	ed					
Lab Sample Name:	C161023-02		le No: A8M5			Sample D	ate: 9/28/2	016 9:57:00 A	M
Location	A12		Matrix Type: Water						
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units	Lab	Validation Qualifier	Validation Notes
Hardness		NA	403	2	2	mg/L			
Lab Sample Name:	C161023-05	C161023-05 Sample No: A8M5-2581 Sample Date: 9/27/20						016 11:00:00 A	ΔM
Location	CC02D				Matrix Ty	pe: Water	•		
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Hardness		NA	591	2	2	mg/L			
Lab Sample Name:	C161023-08	Samp	le No: A8M5	-2582		Sample D	ate: 9/29/2	016 8:51:00 A	M
Location	M12C				Matrix Ty	pe: Water	•		
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Hardness		NA	306	2	2	mg/L			
Analysis Metho	od ICPN	AS Diss. M	etals						
Lab Sample Name:	C161023-02	Samp	le No: A8M5	-2580		Sample D	ate: 9/28/2	016 9:57:00 A	M
Location	A12				Matrix Ty	pe: Water			
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units	Lab	Validation Qualifier	Validation Notes
Antimony		7440-36-0	2.45	1.00	0.500	ug/L			
Arsenic		7440-38-2	2.10	2.00	0.500	ug/L			
Cadmium		7440-43-9	5.11	0.200	0.100	ug/L			
Chromium		7440-47-3	1.56	2.00	1.00	ug/L	J	J	
Copper		7440-50-8	1.80	1.00	0.500	ug/L			
Lead		7439-92-1	< 0.200	0.200	0.100	ug/L	U	U	
Nickel		7440-02-0	1.92	1.00	0.500	ug/L			
Selenium		7782-49-2	1.12	2.00	1.00	ug/L	J	J	
			<1.00	1.00	0.500	ug/L	U	U	
Silver		7440-22-4	<1.00				U	U	
		7440-22-4 7440-28-0	<2.00	2.00	1.00	ug/L	0		
Thallium Uranium		7440-28-0 7440-61-1	<2.00 <0.200	0.200	0.100	ug/L	U	U	
Thallium Uranium Lab Sample Name:	C161023-05	7440-28-0 7440-61-1	<2.00	0.200	0.100	ug/L	U		ΔM
Thallium Uranium Lab Sample Name:	C161023-05 CC02D	7440-28-0 7440-61-1	<2.00 <0.200	0.200	0.100	ug/L Sample D	U ate: 9/27/2	U	ΔM
Thallium Uranium Lab Sample Name: Location		7440-28-0 7440-61-1	<2.00 <0.200	0.200	0.100	ug/L Sample D	U ate: 9/27/2	U 016 11:00:00 <i>A</i> Validation	
Silver Thallium Uranium Lab Sample Name: Location Analyte Antimony		7440-28-0 7440-61-1 Samp	<2.00 <0.200 le No: A8M5	0.200 -2581 Sample Adjusted	0.100 Matrix Typ Sample Adjusted	ug/L Sample D pe: Water Result	U ate: 9/27/2	U 016 11:00:00 <i>A</i> Validation	Validation
Thallium Uranium Lab Sample Name: Location Analyte		7440-28-0 7440-61-1 Samp CAS No	<2.00 <0.200 le No: A8M5 Result Value	0.200 -2581 Sample Adjusted CRQL	0.100 Matrix Typ Sample Adjusted MDL	ug/L Sample D pe: Water Result Units	U ate: 9/27/2 Lab Qualifier	U 016 11:00:00 A Validation Qualifier	Validation

Wednesday, January 04, 2017 Page 1 of 8

Analysis Method ICPMS Diss. Metals

Chromium	7440-47-3	< 2.00	2.00	1.00	ug/L	U	U	
Copper	7440-50-8	16.5	1.00	0.500	ug/L			
Lead	7439-92-1	431	0.200	0.100	ug/L			
Nickel	7440-02-0	5.72	1.00	0.500	ug/L			
Selenium	7782-49-2	2.22	2.00	1.00	ug/L			
Silver	7440-22-4	<1.00	1.00	0.500	ug/L	U	U	
Thallium	7440-28-0	<2.00	2.00	1.00	ug/L	U	U	
Uranium	7440-61-1	0.178	0.200	0.100	ug/L	J	J	

Lab Sample Name: C161023-08 **Sample No:** A8M5-2582 **Sample Date:** 9/29/2016 8:51:00 AM

Location M12C Matrix Type: Water

Analyte	CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Antimony	7440-36-0	<1.00	1.00	0.500	ug/L	U	U	
Arsenic	7440-38-2	1.63	2.00	0.500	ug/L	J	J	
Cadmium	7440-43-9	18.7	0.200	0.100	ug/L			
Chromium	7440-47-3	1.18	2.00	1.00	ug/L	J	J	
Copper	7440-50-8	300	1.00	0.500	ug/L			
Lead	7439-92-1	20.7	0.200	0.100	ug/L			
Nickel	7440-02-0	11.8	1.00	0.500	ug/L			
Selenium	7782-49-2	<2.00	2.00	1.00	ug/L	U	U	
Silver	7440-22-4	<1.00	1.00	0.500	ug/L	U	U	
Thallium	7440-28-0	<2.00	2.00	1.00	ug/L	U	U	
Uranium	7440-61-1	0.568	0.200	0.100	ug/L			

Analysis Method ICPMS Tot. Rec. Metals

Lab Sample Name: C161023-01 **Sample No:** A8M5-2580 **Sample Date:** 9/28/2016 9:57:00 AM

Location A12 Matrix Type: Water

Analyte	CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Antimony	7440-36-0	< 5.00	5.00	2.50	ug/L	U	U	
Arsenic	7440-38-2	<10.0	10.0	2.50	ug/L	U	U	
Cadmium	7440-43-9	5.44	1.00	0.500	ug/L	D		
Chromium	7440-47-3	<10.0	10.0	5.00	ug/L	U	U	
Copper	7440-50-8	< 5.00	5.00	2.50	ug/L	U	U	
Lead	7439-92-1	<1.00	1.00	0.500	ug/L	U	U	
Nickel	7440-02-0	< 5.00	5.00	2.50	ug/L	U	U	
Selenium	7782-49-2	<10.0	10.0	5.00	ug/L	U	U	
Silver	7440-22-4	< 5.00	5.00	2.50	ug/L	U	U	
Thallium	7440-28-0	<10.0	10.0	5.00	ug/L	U	U	
Uranium	7440-61-1	<1.00	1.00	0.500	ug/L	U	U	

Wednesday, January 04, 2017 Page 2 of 8

Analysis Method ICPMS Tot. Rec. Metals

Lab Sample Name:	C161023-03	Sampl	e No: A8M5	-2383		Sample Da	ite: 9/28/2	8/2016 9:57:00 AM				
Location	A12				Matrix Typ	e: Solid (dry wt basis)	ı				
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes			
Antimony		7440-36-0	< 5050	5050	2520	ug/kg d	ry U	UJ	Q			
Arsenic		7440-38-2	61600	10100	2520	ug/kg d	ry D	J-	Q			
Cadmium		7440-43-9	28400	1010	505	ug/kg d	ry D					
Chromium		7440-47-3	<10100	10100	5050	ug/kg d	ry U	U				
Copper		7440-50-8	171000	5050	2520	ug/kg d	ry D					
Lead		7439-92-1	271000	1010	505	ug/kg d	ry D	J-	Q			
Nickel		7440-02-0	11900	5050	2520	ug/kg d	ry D					
Selenium		7782-49-2	<10100	10100	5050	ug/kg d	ry U	UJ	Q			
Silver		7440-22-4	<5050	5050	2520	ug/kg di	ry U	U				
Thallium		7440-28-0	<10100	10100	5050	ug/kg d	ry U	U				
Uranium		7440-61-1	2790	1010	505	ug/kg d	ry D					
Lab Sample Name:	C161023-04	Sampl	e No: A8M5	-2581		Sample Da	ite: 9/27/2	016 11:00:00 A	AM			
Location	CC02D				Matrix Typ	e: Water						
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes			
Antimony		7440-36-0	< 5.00	5.00	2.50	ug/L	U	U				
Arsenic		7440-38-2	2.94	10.0	2.50	ug/L	JD	J				
Cadmium		7440-43-9	49.0	1.00	0.500	ug/L	D					
Chromium		7440-47-3	<10.0	10.0	5.00	ug/L	U	U				
Copper		7440-50-8	18.7	5.00	2.50	ug/L	D					
Lead		7439-92-1	450	1.00	0.500	ug/L	D					
Nickel		7440-02-0	6.80	5.00	2.50	ug/L	D					
Selenium		7782-49-2	<10.0	10.0	5.00	ug/L	U	U				
Silver		7440-22-4	< 5.00	5.00	2.50	ug/L	U	U				
Thallium		7440-28-0	7.74	10.0	5.00	ug/L	JD	J				
Uranium		7440-61-1	<1.00	1.00	0.500	ug/L	U	U				
Lab Sample Name:	C161023-06	Sampl	e No: A8M5	-2584		Sample Da	ite: 9/27/2	016 11:00:00 A	AM			
Location	CC02D				Matrix Ty	e: Solid (dry wt basis)	ı				
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes			
Antimony		7440-36-0	<19900	19900	9950	ug/kg d	ry U	UJ	Q			
Arsenic		7440-38-2	17800	39800	9950	ug/kg d	ry JD	J-	Q			
Cadmium		7440-43-9	<3980	3980	1990	ug/kg d	ry U	U				
Chromium		7440-47-3	<39800	39800	19900	ug/kg d	ry U	U				
Copper		7440-50-8	<19900	19900	9950	ug/kg d	ry U	U				
Lead		7439-92-1	68400	3980	1990	ug/kg d	ry D	J-	Q			
Nickel		7440-02-0	<19900	19900	9950	ug/kg d	ry U	U				
Selenium		7782-49-2	<39800	39800	19900	ug/kg d		UJ	Q			

Wednesday, January 04, 2017 Page 3 of 8

Analysis Method ICPMS Tot. Rec. Metals

7440-22-4

<19900

19900

9950

ug/kg dry U

U

Silver

Thallium		7440-28-0	<39800	39800	19900	ug/kg d	lry U	U	
Uranium		7440-61-1	<3980	3980	1990	ug/kg d	•	U	
Lab Sample Name:	C161023-07	Sample	e No: A8M5	-2582	1	Sample Da	ate: 9/29/2	016 8:51:00 A	M
Location	M12C				Matrix Typ	e: Water			
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Antimony		7440-36-0	< 5.00	5.00	2.50	ug/L	U	U	
Arsenic		7440-38-2	39.3	10.0	2.50	ug/L	D		
Cadmium		7440-43-9	19.1	1.00	0.500	ug/L	D		
Chromium		7440-47-3	<10.0	10.0	5.00	ug/L	U	U	
Copper		7440-50-8	348	5.00	2.50	ug/L	D		
Lead		7439-92-1	116	1.00	0.500	ug/L	D		
Nickel		7440-02-0	12.9	5.00	2.50	ug/L	D		
Selenium		7782-49-2	<10.0	10.0	5.00	ug/L	U	U	
Silver		7440-22-4	< 5.00	5.00	2.50	ug/L	U	U	
Thallium		7440-28-0	<10.0	10.0	5.00	ug/L	U	U	
Uranium		7440-61-1	0.650	1.00	0.500	ug/L	JD	J	
Lab Sample Name:	C161023-09	Sample	e No: A8M5	-2585	1	Sample Da	ate: 9/29/2	016 8:51:00 A	M
Location	M12C			Matrix Type: Solid (dry wt basis)					
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Antimony		7440-36-0	< 5020	5020	2510	ug/kg d	lry U	UJ	Q
Arsenic		7440-38-2	135000	10000	2510	ug/kg d	lry D	J-	Q
Cadmium		7440-43-9	886	1000	502	ug/kg d	lry JD	J	
Chromium		7440-47-3	<10000	10000	5020	ug/kg d	lry U	U	
Copper		7440-50-8	72400	5020	2510	ug/kg d	lry D		
Lead		7439-92-1	1460000	1000	502	ug/kg d	lry D	J-	Q
Nickel		7440-02-0	< 5020	5020	2510	ug/kg d	lry U	U	
Selenium		7782-49-2	<10000	10000	5020	ug/kg d	lry U	UJ	Q
Silver		7440-22-4	11100	5020	2510	ug/kg d	lry D		
Thallium		7440-28-0	<10000	10000	5020	ug/kg d	lry U	U	
Uranium		7440-61-1	<1000	1000	502	ug/kg d	lry U	U	
Analysis Metho	od ICPC	DE Diss. Me	etals						
Lab Sample Name:	C161023-02	Sample	e No: A8M5-	-2580	;	Sample Da	ate: 9/28/2	016 9:57:00 A	M
Location	A12				Matrix Typ	e: Water			
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Aluminum		7429-90-5	341	50.0	20.0	ug/L			
Beryllium		7440-41-7	< 5.00	5.00	2.00	ug/L	U	U	
Berymuni		/440-41-/	<3.00	5.00	2.00	ug/L	O	•	

Wednesday, January 04, 2017 Page 4 of 8

Analysis Method ICPOE Diss. Metals

Iron	7439-89-6	2250	250	100	ug/L	
Magnesium	7439-95-4	9410	250	100	ug/L	
Manganese	7439-96-5	13600	5.00	2.00	ug/L	
Silica (SiO2)	763-18-69	9940	1000	250	ug/L	
Strontium	7440-24-6	823	10.0	2.00	ug/L	
Zinc	7440-66-6	5050	20.0	10.0	ug/L	

Lab Sample Name: C161023-05 **Sample No:** A8M5-2581 **Sample Date:** 9/27/2016 11:00:00 AM

Location CC02D

					_					
Analyte	CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes		
Aluminum	7429-90-5	4040	50.0	20.0	ug/L					
Beryllium	7440-41-7	4.61	5.00	2.00	ug/L	J	J			
Calcium	7440-70-2	215000	250	100	ug/L					
Iron	7439-89-6	26000	250	100	ug/L					
Magnesium	7439-95-4	13100	250	100	ug/L					
Manganese	7439-96-5	25100	5.00	2.00	ug/L					
Silica (SiO2)	763-18-69	32000	1000	250	ug/L					
Strontium	7440-24-6	1860	10.0	2.00	ug/L					
Zinc	7440-66-6	32200	20.0	10.0	ug/L					

Lab Sample Name: C161023-08 **Sample No:** A8M5-2582 **Sample Date:** 9/29/2016 8:51:00 AM

Location M12C

Matrix Type: Water

Matrix Type: Water

				• .	L			
Analyte	CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Aluminum	7429-90-5	2920	50.0	20.0	ug/L			
Beryllium	7440-41-7	< 5.00	5.00	2.00	ug/L	U	U	
Calcium	7440-70-2	93700	250	100	ug/L			
Iron	7439-89-6	16300	250	100	ug/L			
Magnesium	7439-95-4	17500	250	100	ug/L			
Manganese	7439-96-5	6430	5.00	2.00	ug/L			
Silica (SiO2)	763-18-69	13200	1000	250	ug/L			
Strontium	7440-24-6	2410	10.0	2.00	ug/L			
Zinc	7440-66-6	6060	20.0	10.0	ug/L			

Analysis Method ICPOE Tot. Rec. Metals

Lab Sample Name: C161023-01 **Sample No:** A8M5-2580 **Sample Date:** 9/28/2016 9:57:00 AM

Location A12 Matrix Type: Water

				• .	•							
Analyte	CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes				
Aluminum	7429-90-5	362	50.0	20.0	ug/L							
Beryllium	7440-41-7	< 5.00	5.00	2.00	ug/L	U	U					
Calcium	7440-70-2	147000	250	100	ug/L							
Iron	7439-89-6	2420	250	100	ug/L							

Wednesday, January 04, 2017 Page 5 of 8

Analysis Method ICPOE Tot. Rec. Metals

1111011 9515 11101110	<i>70 101</i> 0	E Ton Ree.	111010115						
Magnesium		7439-95-4	9410	250	100	ug/L			
Manganese		7439-96-5	13700	5.00	2.00	ug/L			
Silica (SiO2)		763-18-69	10000	1000	250	ug/L			
Strontium		7440-24-6	835	10.0	2.00	ug/L			
Zinc		7440-66-6	4990	20.0	10.0	ug/L			
Lab Sample Name:	C161023-03	Sample	No: A8M5	-2583		Sample Da	te: 9/28/2	2016 9:57:00 A	M
Location	A12				Matrix Ty	pe: Solid (dry wt basis))	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units			Validation Notes
Aluminum		7429-90-5	23700	50.5	20.2	mg/kg d	r D		
Beryllium		7440-41-7	47.7	5.05	1.01	mg/kg d	r D		
Calcium		7440-70-2	4420	252	101	mg/kg d	r D		
Iron		7439-89-6	209000	252	101	mg/kg d	r D	J-	L
Magnesium		7439-95-4	328	252	101	mg/kg d	r D		
Manganese		7439-96-5	45600	5.05	2.02	mg/kg d	r JD	J	Α
Silica (SiO2)		763-18-69	22300	1010	252	mg/kg d	r D		
Strontium		7440-24-6	46.1	10.1	2.02	mg/kg d	r D		
Zinc		7440-66-6	12500	20.2	10.1	mg/kg d	r D		
Lab Sample Name:	C161023-04	Sample	No: A8M5	-2581		Sample Da	te: 9/27/2	2016 11:00:00 A	AM
Location	CC02D								
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Aluminum		7429-90-5	4050	50.0	20.0	ug/L			
Beryllium		7440-41-7	4.55	5.00	2.00	ug/L	J	J	
Calcium		7440-70-2	213000	250	100	ug/L			
Iron		7439-89-6	26800	250	100	ug/L			
Magnesium		7439-95-4	13000	250	100	ug/L			
Manganese		7439-96-5	25300	5.00	2.00	ug/L			
Silica (SiO2)		763-18-69	31600	1000	250	ug/L			
Strontium		7440-24-6	1890	10.0	2.00	ug/L			
Zinc		7440-66-6	31500	20.0	10.0	ug/L			
Lab Sample Name:	C161023-06	Sample	No: A8M5	-2584			te: 9/27/2	2016 11:00:00 A	AM
Location	CC02D				Matrix Tv	pe: Solid (dry wt basis))	
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result			Validation Notes
Aluminum		7429-90-5	235	49.8	19.9	mg/kg d	r D		
		7440-41-7	<4.98	4.98	0.995	mg/kg d	r U	U	
Beryllium									
-		7440-70-2	549	249	99.5	mg/kg d	r D		
-		7440-70-2 7439-89-6	549 396000	249 249	99.5 99.5	mg/kg d mg/kg d		J-	L
Calcium Iron							r D	J-	L
Beryllium Calcium Iron Magnesium Manganese		7439-89-6	396000	249	99.5	mg/kg d	r D r U		L A

Wednesday, January 04, 2017 Page 6 of 8

Analysis Method ICPOE Tot. Rec. Metals

Strontium		7440-24-6	<9.95	9.95	1.99	mg/kg	dr U	U	
Zinc		7440-66-6	144	19.9	9.95	mg/kg			
Lab Sample Name:	C161023-07	Sampl	e No: A8M5	5-2582		Sample D	ate: 9/29/2	2016 8:51:00 A	M
Location	M12C				Matrix Ty	pe: Water			
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Aluminum		7429-90-5	3620	50.0	20.0	ug/L			
Beryllium		7440-41-7	< 5.00	5.00	2.00	ug/L	U	U	
Calcium		7440-70-2	94700	250	100	ug/L			
Iron		7439-89-6	58800	250	100	ug/L			
Magnesium		7439-95-4	17700	250	100	ug/L			
Manganese		7439-96-5	6440	5.00	2.00	ug/L			
Silica (SiO2)		763-18-69	14200	1000	250	ug/L			
Strontium		7440-24-6	2440	10.0	2.00	ug/L			
Zinc		7440-66-6	5780	20.0	10.0	ug/L			
Lab Sample Name:	C161023-09	Sampl	e No: A8M5	-2585		Sample D	ate: 9/29/2	016 8:51:00 A	M
Location	M12C				Matrix Type: Solid (dry wt basis)				
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units		Validation Qualifier	Validation Notes
Aluminum		7429-90-5	3500	50.2	20.1	mg/kg	dr D		
Beryllium		7440-41-7	< 5.02	5.02	1.00	mg/kg	dr U	U	
Calcium		7440-70-2	1130	251	100	mg/kg	dr D		
Iron		7439-89-6	158000	251	100	mg/kg	dr D	J-	L
Magnesium		7439-95-4	1200	251	100	mg/kg	dr D		
Manganese		7439-96-5	511	5.02	2.01	mg/kg	dr D	J	A
Silica (SiO2)		763-18-69	5050	1000	251	mg/kg	dr D		
Strontium		7440-24-6	27.7	10.0	2.01	mg/kg	dr D		
Zinc		7440-66-6	287	20.1	10.0	mg/kg	dr D		
Analysis Metho	od TM_	Mercury 74	73						
Lab Sample Name:	C161023-03	Sampl	e No: A8M5	5-2583		Sample D	ate: 9/28/2	2016 9:57:00 A	M
Location	A12				Matrix Ty	pe: Soil			
Analyte		CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Units	Lab Qualifier		Validation Notes
		7439-97-6	0.106	0.047	0.024	mg/kg	dr D	J-	Н
Mercury		g .	e No: A8M5	-2584		Sample D	ate: 9/27/2	2016 11:00:00 A	AM
•	C161023-06	Sampl	e No: Aowi	2301					
Lab Sample Name: Location	C161023-06 CC02D	Sampl	e No: Aowi	2301	Matrix Ty	pe: Soil			
_		Sampl	Result Value	Sample Adjusted CRQL		pe: Soil Result Units		Validation Qualifier	Validation Notes

Wednesday, January 04, 2017 Page 7 of 8

Analysis Method TM_Mercury 7473

Lab Sample Name: C161023-09 **Sample No:** A8M5-2585 **Sample Date:** 9/29/2016 8:51:00 AM

Location M12C **Matrix Type:** Soil

Analyte	CAS No	Result Value	Sample Adjusted CRQL	Sample Adjusted MDL	Result Lab Units Qualifie	Validation er Qualifier	Validation Notes
Mercury	7439-97-6	0.089	0.020	0.010	mg/kg dr D	J-	Н

Wednesday, January 04, 2017 Page 8 of 8